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DEEP RECTAL ABSCESSES.*

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The subject of rectal abscesses being such a vast and unlimited one, I will not treat of the more common varieties but confine my paper to the rarer kind known as deep abscesses, or as they can better be named anatomically, retro-rectal abscesses and superior pelvi-rectal abscesses. And in order that an intelligent idea may be had of them, it is well to briefly review the anatomy of the parts involved.

Between the levator ani and the peritoneal attachment of the rectum are three cellular spaces in which ramify the blood vessels, nerves and lymphatics before they enter the rectum. The lateral ligaments of the pelvic portion of the rectum, which are the principal supports of the rectum, originate at the points where the lateral sacral arteries diverge and attach themselves to the sides of the rectum. The space thus formed between the rectum and sacrum is termed the retro-rectal space. Anteriorly the prostato-peritoneal aponeurosis, which is closely attached to the prostate, passes backwards over the seminal vesicles and is attached to the sides of the rectum with the ligaments of the pelvic rectum. It is also attached to the anterior wall and divides this space into two parts. These are called the superior pelvi-rectal spaces, and separate the rectum from the bladder, prostate and seminal vesicles in the male, and from the broad ligaments and uterus in the female. These spaces are all separate and distinct from each other, being separated from the ischio-rectal fossa by the levator ani muscle and its limiting fascia.

Retro-rectal abscesses, or those originating between the rectum and the sacrum, may be caused by neurosis of the sacrum, coccyx, or ilium, by injuries to the rectum, or more frequently by internal proctotomy where the drainage is of necessity incomplete.

The symptoms of these abscesses are very different from those of ordinary rectal abscesses, inasmuch as they are nearly always of slow origin, and are not associated with a distinct chill and such

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pronounced constitutional disturbances as accompany ordinary ischio-rectal abscesses. There will be a heavy dragging feeling in the region of the sacrum, slight elevation of temperature, and the patient will have the cachexia peculiar to the people with a slow chronic suppuration in any other part of the body. Upon examination of the rectum with the finger, a boggy mass will be felt in the hollow of the sacrum. At first no fluctuation will be apparent and when this is present, the abscess may burst at any time either into the rectum or through the levator ani into the ischio-rectal fossæ. The treatment of these cases is early incision and drainage. An incision sufficiently large to produce complete drainage should be made, the abscess cavity washed out with a formaldehyde solution and two long drainage tubes inserted; these drainage tubes may be pinned to the edges of the incision with safety pins. The abscess cavity should be irrigated once or twice daily and the patient should be encouraged to keep out of bed as much as possible as the upright position facilitates drainage.

An interesting case of this type of abscess recently came under my care: Mr. W., suffering from a chronic ulcerative colitis, complained of constant pain in the region of the sacrum, but as this is a common symptom of chronic colitis, nothing was thought of it. I performed an appendicostomy, the object being to irrigate the colon through the appendicular opening. About two weeks after the operation a small fluctuating swelling was noticed over the right ischio-rectal fossa. It was incised and a large amount of pus discharged. The discharge being so excessive, I introduced my finger into the rectum and found a boggy mass between the rectum and the sacrum and by making pressure backward, an increased flow of pus started. On introducing my finger into the incision, I found that it passed through the ischio-rectal fossa into the retro-rectal space. A pair of uterine dressing forceps was introduced its full length into the incision without meeting with any resistance. The opening was enlarged and drainage tubes inserted. The further course of the abscess was uneventful, but as the patient died three weeks later from general tuberculosis, and I was unable to secure a post mortem, the exact cause of the abscess, I am unable to state.

Superior pelvi-rectal abscesses are generally developed from some other pelvic organ than the rectum. In the male they may be caused by posterior urethritis, or inflammation of the prostate; in the female they are generally called pelvic abscesses and caused from infectious disease of the generative organs.

The symptoms of these abscesses generally differ from those of the retro-rectal variety in that they generally commence with a chill, fever, increased pulse rate, pain and interference with the urinary organs. In this variety the urinary symptoms may be more marked than the rectal. While the diagnosis in the latter is not difficult, in

the beginning the symptoms may be quite obscure and a complete history of all previous diseases and symptoms of the pelvic organs will need to be secured and a thorough examination, or examinations made. In case a positive diagnosis cannot be made at the first examination, the patient should be kept in close surveillance and repeated examinations made, as it is of vital importance to the future welfare of these patients that a diagnosis be made before any of the graver complications arise. The treatment of this type of abscess is the same as that for all other varieties of abscesses in the region of the rectum, namely early incision and free drainage. They should not be allowed to perforate the rectum, bladder or urethra, or peritoneum, but should be opened by a perineal incision, if necessary, carefully dissecting the rectum away from bladder and prostatic attachments. They should never be opened through the rectum. When it becomes necessary to make deep perineal incisions, they should be made by dull dissection, using the finger to avoid wounding the peritoneum. The opening in the levator ani should be enlarged by a transverse incision through its fibres as otherwise the drainage would be incomplete. Rubber drainage tubes should be introduced and the abscess cavity irrigated with antiseptic solution. In all these cases I use for the first irrigation a strong solution of formaldehyde and think it has a decided beneficial effect. The sphincter muscle should always be thoroughly dilated.

The following case of this type of abscess came under my care in June, 1905. When first seen the patient had a temperature of 104 degrees, pulse 160 very weak, and unmistakable septic appearance. Gave the history of having felt badly for three weeks prior, two weeks of which he had been in bed. Upon examination, a small opening was found over each ischio-rectal fossa with but a very slight discharge of pus. The patient being in such a desperate condition it was doubtful if he could stand an anesthetic, but a small amount of ether was given him. The contents of each ischio-rectal fossa were found to be gangrenous and were removed. At the apex of each fossa pus was exuding from a small opening in the levator ani muscle. These were enlarged by incising the muscular fibres transversly, the cavity thoroughly irrigated with a formaldehyde solution and double drainage tubes introduced in each cavity. The patient made an uneventful but tedious recovery, and has had no recurrence of any trouble since. At time of operation a slight discharge from the urethra was observed although the patient denied the existence of any gonorrheal trouble for several years. The probability is that these abscesses were gonorrheal in nature.

In closing, I desire again to impress upon the profession the fact that these obscure cases of trouble in the pelvic region should be thoroughly examined and the patient kept under close observation until a positive diagnosis is made, as neglect of them may entail disastrous complications upon the patient.

COUGH.

Extrapulmonary Causes of Cough, which Develop in Consequence of Pathologic Changes in the Upper Respiratory Tract, and Disturbances in the Function Thereof.

BY J. C. BUCKWALTER, M. D., ST. LOUIS, MO.

One of the difficult problems confronting the physician is to find the cause of, and cure for stubborn, harassing and persistent cough. This paper refers to those types of cough in which pathologic changes in the chest can be excluded. This class of cases have usually run the gamut of the whole pharmacopeia. Yet, aside from temporary relief, the cough lingers, causing greater or less annoyance and concern to the patient, family and friends.

The assurance that the cough is quite innocent in character, that no lesions or evidence of tuberculosis are present, offers the patient little comfort. The physician often finds it difficult to retain the confidence of the consultant, to pacify him and prevent undue and unnecessary worry, particularly in this time of enlightenment on, and crusade against tuberculosis.

Probably there is no symptom more frequently met with, aside from pain, that causes more distress than cough. Cough is an indication of some irritation or disturbance in the upper or lower respiratory passages. I believe, that in the vast majority of instances, the actual disturbance to be extrapulmonary in origin, and quite innocent in its nature, contrary to the conviction of the patients, who often insist that the seat of the trouble must be in the chest.

Extrapulmonary cough has been ascribed to almost as many causes as there are organs in the body. Various theories as to the production of reflex cough formally enjoyed a wide recognition among physicians. However, by a thorough and accurate examination, the extraneous cause will usually be found to be due to some pathologic change in the nose, naso-pharynx, oro-pharynx, palatal region, glossa-epiglottic fossae, larynx, or upper third of the trachea.

Cough is usually spoken of, as direct or reflex. It is a direct cough when there is irritation from congestion, edema, inflammation, pressure, swelling, or from foreign substances, such as mucous, pus, etc., within the respiratory tract. Cough is a reflex phenomenon when due to some pathologic change remote to the respiratory organs.

Apparently there exists among various observers more or less confusion as to the mutual understanding of reflex cough. There are those who consider all cough due to altered function of the upper air passages as reflex, while others classify it a direct cough.

From a physiologic sense, all coughs are reflex, that is, we have

an exciting organ, a central organ, and this is united in turn with an executing organ. An admirable example and interesting source of physiologic reflex cough is exhibited by irritation in the external auditory canal by the presence of a foreign body, impacted cerumen, inflammation and irritation in the cerumen secreting area, the osteo-cartilaginous junction of the auditory canal and the drum membrane. Well illustrated in this typical case. Three years ago, Mr. A., age 38, consulted me for tinnitus in the right ear, slight impairment of hearing and occasional pruritis in the external auditory canal.

On introducing the aural speculum into the auditory canal, a most persistent and violent cough was induced. An inspection of the canal showed it to be covered with dark, dry, scaly, lardaceous substance extending to the depth of the drum, which was hyperemic and thickened. The patient remarked that he had been troubled with this troublesome cough for years. This paroxysm was likely to come on at any time. During the past eighteen years he has consulted physicians who had prescribed various remedies with little or no benefit to the cough. He has been advised to leave this climate that his lungs were affected. However, the patient remained in St. Louis, continuing to cough, but took on weight.

Diagnosis.—Eczema of the external auditory canal. Treatment directed to the dermatitis stopped the cough, the itching, the tinnitus, and restored the hearing to normal. To the present the introduction of a specula or probe evokes the same old cough.

It occurs to me undue stress has been laid on nasal and naso-pharyngeal reflexes as a causative factor in the production of cough. It is a term misapplied.

My experience has been that almost every case of cough due to some disturbance in the upper air passages, rather than a reflex cough, is a cough due to direct mechanical irritation of either the epiglottis, lateral walls of the pharynx, sensitive areas in the larynx, or in the trachea and bronchi. I hardly believe that too liberal construction can be given the importance of nasal and naso-pharyngeal obstruction and its interference with proper respiration, causing periodic or absolute mouth breathing.

Mouth breathing is a course productive of many bad results, and harmful in proportion, as the air inspired is impure, charged with dust, not sufficiently warmed, or humidified before reaching the epiglottis, larynx, trachea and bronchi. In consequence, direct mechanical irritation is set up with resultant direct cough.

Intra-nasal factors, which may induce cough from indirect irritation through mouth breathing or from hypersecretion in the pharyngeal space, may be mentioned as chronic rhinitis, intumescent and chronic hypertrophy of the middle and inferior turbinate bones and of the mucous membranes in general, posterior hypertrophies, deflected

septum, spurs, ridges or other abnormalities of the septum and floor of the nasal fossae and polypi.

Mention should be made of necrotic, purulent, syphitic or atrophic rhinitis and sinusitis causing stenosis or profuse secretion which trickles down and pharyngeal walls to irritate the sensitive areas of the epiglottis, larynx or even the trachea.

Within the confines of the upper pharynx, the pathologic changes, namely, hypertrophic and granular pharyngitis, atrophic pharyngitis, enlarged pharyngeal tonsil or adenoids, in so far as the condition is productive of partial or absolute stenosis, or in proportion as the hypersecretion from this region provokes irritation to the sensitive areas well supplied with peripheral nerve and filiments, will cough follow.

In the lower pharynx cough is induced by elongated uvula, low hanging uvula from relaxed palate and edematous uvula from contact with the epiglottis.

In the glosso-epiglottis fossae from vericosity and hypertrophy of the lingual or tongue tonsil, the cough is dependent upon the degree of disturbance inflicted to the highly sensitive epiglottis.

A causative factor sometimes overlooked is hypertrophy of the lateral pharyngeal walls or so called pharyngitis lateralis, which in some instances is productive of distress and harrassing symptoms.

The faucial tonsils in my experience have always been innocent offenders so far as related to cough.

Cough from the epiglottis may be looked for in edema, ulceration and inflammation.

In the larynx, in benign and malignant growths, edema, foreign bodies, ulcers and formation of scar tissue, in acute and chronic inflammation, cough is usually a prominent feature.

Treatment consists in opening the upper air passages, removing obstructions, establishing free and easy physiologic respiration, lessening secretion, and obliterating all sources of direct irritation by or through means accessible and indicated by the conditions confronting the operator.

Acknowledging the value of clinical case data, induces me to append brief notes from the following cases: Case 1.—November, 1905. Elizabeth L., age 9. Referred by Dr. Kennedy for examination of the nose and throat, and treatment if necessary. Complains of cough the past two months. Internal medication unsatisfactory. Present state, no fever, normal pulse, appetite good. Patient appears to breathe through the nose freely. Mother has never observed that the child breathes otherwise. Inspection of the nose, naso-pharynx, oro-pharynx and larynx did not reveal any abnormal alterations, aside from some slight bogginess of the lower margin of the inferior turbinates. The mother was instructed to note breathing during sleep. The report next day confirmed my belief that respiration was carried

on at night, when recumbent, through the month. Diagnosis:—Intumescent hypertrophy of the inferior turbinate bodies.

Treatment:—Locally in the nose every third day at the office, a 2 per cent. cocaine spray to lessen irritation, induced by the application of a 1 per cent. copper sulphate solution. This was followed by an oily spray of menthol gr. 3, camphor gr. 2, oil eucolyptol gtt. 3, in vasenol oz. 1. to the nose, naso-pharynx and by deep inhalations into the larynx, trachea and bronchi. At home, oil vasenol comp. oz. 1, with instructions to instil 10 drops in each nostril every three hours. Results:—The nasal congestion soon disappeared, resulting in re-established nasal respiration at night. Within three weeks the cough was cured.

From the case cited, it will be noted that it is at night, when recumbent and asleep, the physiologic function of the nose is arrested by hypostatic congestion of the mucosa. From mere inspection of the nasal chambers, in many instances, a definite diagnosis can not be made. However, by requesting the patient to observe the condition of his mouth and nose on awaking in the night and morning, and to note the nasal stoppage, and consequent parched, dry, lathery, pasty feeling in the mouth and throat, with other disagreeable symptoms, as hawking, gagging, wretching, etc., a definite conclusion can e drawn and diagnosis made.

Case 2.—Five years ago, Mrs. L., age 26, consulted me complaining of a lump in the throat and cough for the past two years. Symptoms were worse after dining. Present state.—Examinations revealed a large spur on the septum left naris, moderate pharyngitis and hypertrophy of the tongue tonsil. Diagnosis:— Hypertrophy of the lingual tonsil. Treatment: confined to reducing the enlarged tongue tonsil with the galvanic cautery. This was accomplished in three sittings when the symptoms cleared up.

Case 3.—April, 1904. Mr. G. W. G., age 45. Complains of the nose stopping for the past fourteen months, growing worse and especially annoying at night, when he reathes through the mouth. Always has a cold in the head. The ears ring and hearing is impaired. Early in the mornings is awakened by an annoying cough which is troublesome all day. Has taken many cough remedies without relief.

Present state: The naries are filled with thick, greenish secretion. The septum is thickened narrowing the nasal fossae. The inferior turbinates are turgescent filling the inferior meatuses. After removing the secretion and reducing the congestion a fair view of the nasal cavities was made possible. On the posterior end of the septum a crusty scab was clinging. By removing the scab the probe came in contact with denuded bone. Questioning the patient brought forth a history of specific trouble in the family.

Ears: Drums normal. Hearing by watch one inch right and left.

Diagnosis: Syphilitic necrosis of the vomer.

Treatment: Internally syrup stillingia comp. one teaspoonful three times daily. Ten gr. kali. Iod. 3 times daily.

Locally: Currettement of the necrotic bone with subsequent application of 20 per cent. solution silver nitrate for several weeks. Cleansing douche with an alkali solution and spraying with an astringent oily spray.

Results: Within three weeks the nasal respiration was fairly restored. Tinnitus ceased. Hearing increased to 30 inches by the watch. In six weeks the cough entirely disappeared.

Case 4. 1904. Rosie H., age 10. Complains that for the past two years has been troubled with a hacking cough more or less constant and always worse at night. Many cough mixtures from drug stores have been tried and several physicians have prescribed without relief. The father thinking the trouble may possibly be in the throat brought the child to be examined.

Present state: The nose, pharynx and larynx appear normal. The uvula does not appear unduly long on inspecting the throat with the tongue depressor, however, by examining without depressing the tongue the soft palate is noted to hang low and the uvula elongated. This case demonstrates the necessity for using care in examining these obscure conditions in highly sensitive throats.

Treatment: Removal of two-thirds of the uvula cured the cough.

Case 5. Mr. E. W., age 37, brought to me by Dr. Becker for examination and treatment of the nose. Complains for over two years with stopping up of the nose particularly at night. Takes frequent colds in the head. Annoyed by mucus dropping into the throat. For over a year has been troubled with a cough paroxysmal in character. The cough is especially annoying about bed time in the night and mornings. Of late the cough has been unusually annoying early in the evenings especially when out in company. At times the paroxysm is so violent that the patient is forced to retreat to out door air. Mr. W. has never sought relief for the cough but has been treated for the nasal stenosis.

Present state: On the septum right naris a large spur projects impinging upon a hypertrophic inferior turbinate. In the left naris the upper third of the septum is thickened and blocks that part of the fossae not closed by the tumified inferior turbinate.

The pharynx is chronically inflamed. The larynx appears normal.

Diagnosis: Chronic hypertrophic rhinitis, and spurs on the septum.

Treatment: Removal of spurs and hypertrophies with intranasal saws and scissors. This treatment resulted in establishing free nasal respiration with gradual cessation of the cough.

All patients and many physicians believe that the cough symptoms should vanish immediately on establishing nasal respiration, overlooking the fact that the symptom no doubt in most instances has been a long time in developing. However, the time for recovery usually takes days, weeks or months depending upon the degree of irritation set up in the lower respiratory tract.

DISCUSSION.

Dr. W. U. Kennedy, St. Louis:—There is nothing more disastrous to the peace of mind or the professional reputation of the general practitioner than those patients who are under his care for a prolonged period of time, and then fail to get relief until the cause of the condition is found by a more acute observer. The symptom of mouth breathing was what made me send this case to Dr. Buckwalter for examination. His results in that case have caused me to make a much more careful examination in other cases and I have found some seven or eight cases of this extra-pulmonary cough. In every case of persistent cough I advise not only a thorough examination of the lungs but of the mouth, nose and pharynx also. Most of these cases have been caused by nasal conditions not appreciable by ordinary methods of examination. When I find such cases I send them to the rhinologist for nasal examination.

SOME REMARKS ON THE TREATMENT OF CHRONIC JOINT DISEASE.*

BY M. M. EDMONSON, M. D., KANSAS CITY, MO.

The subject of this paper covers a broad field, and I shall make no attempt to treat any one part of it specifically, but will try to emphasize the salient points that experience and observation have proven to be of the greatest importance. Treated in this way it will, I believe, be productive of more good than the report of some rare case, or the elucidation of the technique of some surgical proceedure. It is probable that our work in medicine and Surgery would be more satisfactory if we knew better how to practically apply the knowledge we already possess. The results of this deficiency are seen most often in the treatment of chronic diseases, but, whatever may be the cause, considering the gravity of these cases, this is the most neglected field in medicine today. The brilliant work of the American surgeon has somewhat obscured the principles of treatment and their application in these cases. Immediate results and the prestige that comes to the successful abdominal surgeon are not incentives here. *Time*, an important factor in these cases, is often so prolonged that the surgeon himself loses that interest necessary to perfect a cure and, again, the treatment of these diseases in their incipiency may be thought to be too simple to demand serious thought and attention.

Rest, to a diseased joint, carelessly suggested by the surgeon, or

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the application of some liniment, is often only the beginning. However, after these diseases have reached the second and third stages, they have become more interesting, and more active surgical measures are called for, and yet we all know that joint surgery is unsatisfactory and disappointing in its final results.

A restoration to the normal is impossible after the continuity of a joint has become destroyed. In diseases of the spine, it is almost relegated to the care of resultant abscesses. If surgery is so important here, why not prevent the conditions demanding it. However, these cases drift from one surgeon to another, and the hunchback and permanent cripple are living testimonials to the efficacy of the surgery of today. In many diseases there is a natural tendency to a restoration to health, nature's wonderful alchemy throwing off the living germ, or the dead cell. But, in these diseases the mechanical law of nature is the destroying force and, if not overcome, the disease progresses. To forcibly illustrate this: In the lower animals, especially cattle, tuberculosis is very common, their susceptibility to this disease being well known. Nevertheless a diseased spine, with a resultant kyphosis, does not exist, showing that the law of gravity is an important factor in producing this deformity. Several years ago, at a meeting of prominent English surgeons, after the late Dr. Lewis A. Sayre had demonstrated the use of the plaster jacket and jury mast, one of those present remarked that "the day of the hunchback was passed." This prophecy probably would have been more truly fulfilled if he had advocated teaching children to walk on all fours. Yet I am convinced, and honestly believe, that this prophecy might have been truly prophetic if the principles laid down by Dr. Sayre had been effectively carried out in every case of incipient Pott's disease. By effectively I mean: the superimposed weight lifted off the diseased spine and the muscular contraction overcome. It matters little how this is accomplished if the desired end is reached. The method employed is more often determined by the surgeon's personal experience. I have seen several cases, when the jacket was used as the only support and the disease high up in the dorsal region, a red flannel bandage around the abdomen would have been as equally ecective. Unfortunately any mental impression produced in these cases does not effect the disease.

It might be said, with some degree of truth, that as little thought is given in making a diagnosis of incipient joint diseases as is given the treatment later. It is remarkable with what frequency rheumatism and growing pains end their usefulness, by the development of a kyphosis, or a distorted joint. It is of the greatest importance to make a diagnosis early in joint diseases, as the best results, functional and otherwise, can then be obtained and, since these diseases are often so obscure and insidious in their development, the greatest

care should be taken in every suspected case; every symptom, referrable to a joint complication, should be carefully watched. The gravity and seriousness of these cases demand every consideration. While death may be remote, yet we know, if the disease is allowed to progress, life is materially shortened; add to this the months and years of suffering, the great care and anxiety entailed on the mother and family. Is not the prevention of all this sufficient incentive to a more thorough and systematic work along this line? That these cases are allowed to progress until the articular surfaces are destroyed and perfect functional repair impossible, is the more astonishing as the immediate cause depends on two well known factors: Muscular contraction and gravity, and these are the only two important elements to be considered in the mechanical treatment of *any* of the joint diseases. The sole object of this is to give rest to the joint. Only in this condition of a lessened blood supply can a reparative process be begun. This principle was well brought out by Dr. McArthur, of Chicago, at the meeting of the Missouri Valley Medical Association at St. Joseph in March. In speaking of the treatment of intestinal tuberculosis, a certain restricted diet giving physiological rest to the diseased parts, gave the very best results in these cases.

This protection to a joint must be continued for months, or even years, until all danger of a relapse has passed. It is better to make the error of continuing the treatment months longer than might be absolutely necessary than to discontinue it one day too soon. I believe many of the relapses occurring in these cases, are due to neglect, or carelessness, during the course of treatment, and I am convinced that many could be cured, in a comparatively short time, if the many relapses, though slight, were guarded against. There have been no startling advances made in the treatment of these diseases, but the ingenuity of Sayre, Phelps, Taylor, and others, have given us the mechanical means and these, with a thorough understanding of the object to be attained, will meet the requirements in most cases. These, however, are often used without a full knowledge of their application, and I fully agree with a remark recently made by Dr. Howard Hill, of Kansas City, that: "so little thought is given the subject that the instrument maker usually suggests the kind of brace to be used and applies it under the direction of the physician, who has been privately coached on the subject; the patient is then dismissed with instructions to 'keep everything properly adjusted.'" It is unnecessary to detail the results of this method of treatment.

Aside from the mechanical, an equally important part of the treatment should be as carefully considered, whatever may be the etiology and pathology of a chronic joint disease, and though we

know that a very large per cent. is of tuberculous origin, still, in all cases, there is a marked lowering of vitality and the resisting element. The importance of building up the general health and restoring the vitality, requisite to the throwing off, or preventing the encroachment of the disease, is as essential in these cases as it is in pulmonary tuberculosis. The results of outdoor life and forced feeding in pulmonary cases has astonished even its most earnest advocates. This treatment, when combined with a thorough protection to the joint, will give as brilliant results in these cases. It is only in recent years that the greatest of all tonics, sun-light and fresh air, are being fully appreciated. These should be taken to the limit and only the most inclement weather should interfere. With the body well protected cold weather is, if anything, the more invigorating, and the dreaded night air of our forefathers is even thought good enough to fill to the full the measure of this great tonic. This is now fully appreciated by the physician and its importance should be impressed on the patient by positive and explicit instructions. At Mercy Hospital, of Kansas City, "An institution for ruptured and crippled children," with which I have been connected for the past three years, we have insisted on an out-door life for the children, and have made every provision possible for this to be carried out. The results have shown conclusively *this* to be the most important adjunct in the handling of these cases.

To repeat and emphasize what I have said: The gravity of these cases demand the best we have to give, 1st: In making an early diagnosis. 2nd: Instituting a line of treatment best adapted to the case and rigidly carrying it out. 3rd: Building up and maintaining the general health, with special attention to out-door life, and forced feeding.

NEURASTHENIA, TRAUMATIC AND IDOPATHIC: ITS PATHOLOGY AND PROGNOSIS.*

BY DAVID S. BOOTH, M. D., ST. LOUIS, MO.

According to the now generally accepted theory of the histology of the nervous system, it is composed of a vast number of neurons, each consisting of a cell body with its processes (axone and dendrites), having the power of assimilation and possessing the properties of irritability, mobility and conductibility, so that each neuron is anatomically a unit though physiologically a part of one great complex hierarchy functionally grouped, so that while each plane is responsive to stimuli from all other planes as well as to external irritation, all are normally subservient to, and more or less under the control of, the highest area, viz:—The psychical center.

In the vigor of health and strength, the cells are plump, being filled with material for their own nourishment as well as for maintaining their functional activity, resembling in appearance, elastic capsules filled with fluid; whereas physiological activity causes them to shrink, giving them the appearance of elastic capsules from which much of the fluid has escaped. This is a normal, healthful fatigue from which restoration follows rest and sleep, but continued enforced activity, occasions a pathological fatigue—Neurasthenia, which, as its names indicates, is a "nerve (cell) weakness"—an acquired persistent functional debility from which there results an exaggerated irritability and instability of the neurons.

Neurasthenia is not only a primary exhaustion of the nerve cells, but an autochthonous intoxication from irritant poisons[1] resulting from cell metabolism which accumulate by virtue of the disproportion between rest and exercise, causing cerebral irritation which, projected as peripheral sensations and misinterpreted as evidences of local disease, leads to expectant attention, introspection and apprehension, from which erethism and hyperaesthesia of the higher cerebral neurons result, intensifying the already present sensations and sapping the residual vitality of the cells. Since corporeal activity is proportionate to cerebral vigor, there is present in neurasthenia, anaemia from weakened digestion and circulation, and auto-intoxication from the absorption and retention of toxines due to intestinal atony and renal insufficiency.

There is produced a vicious cycle of action and reaction, which, if not interrupted by appropriate treatment, continues until it results in a general collapse of the patient.

From this brief description of the process by which Neurasthenia

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is evolved, it will be noted that it is slowly developed and results from prolonged excessive cerebral activity, and then usually, if not always, in the neuropathically endowed, when accompanied by continuous exalted emotionalism; i. e., anxiety, worry, grief, etc., so that it is at least doubtful if it can result primarily and solely from a single shock, whether physical or psychical.

Physical injury would cause organic disease which would, doubtless, primarily involve the blood vessels and connective tissue, affecting the neurons only secondarily, whereas mental shock would involve the psychical centers—most likely a temporary functional disturbance of the neurons, producing an abeyance of cerebral activity, as in coma, shock or collapse; an excitation, as delirium, or an instability, as hysteria,—all readily explained by the neuron theory of cerebral architecture, which recognizes the neurons as storehouses of energy which may be discharged by stimuli received from higher or lower neuron areas through contact of their processes.

This loss of energy may occur suddenly or slowly, continuously or intermittently, each condition presenting distinctive symptoms. The result is a more or less withdrawal of the fatigued cells from further activity until recuperated—an explanation of the improbability of permanent results following single psychic shocks when not followed by stress, i. e., apprehension, worry, etc.

Tuke anticipated the neuron theory when he wrote:—

"In considering the changes which occur in the tissue of the brain and the vessels, the frequently felt difficulty of determining their order of sequence arises; but certainly when, from an overwhelming mental shock a man becomes paralyzed, whether in speech or limb, it seems most natural to conclude that, as mind is the function of brain, the first event in the series is a change in the normal condition—the molecular arrangement—of some portion of the brain tissue, which is transmitted simultaneously to the conductors of voluntary motor power, producing transient or permanent effects, according to its force and the weakness or proclivities of the part upon which it falls, and to the vaso-motor nerves, causing sudden vascular changes in the brain, which interfere with its nutrition."

These are the changes found in idiopathic neurasthenia, the vascular changes evidently being secondary and consequent to the weakened neurons.

Emotional shock could act as the "straw" to precipitate an impending breakdown, or furnish food for morbid introspection, apprehension and auto-suggestion, which with enforced physical inactivity, would ultimately result in neurasthenia; but would it be traumatic?

Again, a localized physical injury can, through enforced introspection and expectant attention, serve as the starting point in our

vicious circle, though, as Erichsen observed, it is rare for nervous symptoms to follow apparent physical injuries other than to the nervous system itself.

Erichsen wrote, "A person who by any of the accidents of civil life meets with an injury by which one of his limbs is fractured or is dislocated, necessarily sustains a very severe shock, but it is the rarest thing possible to find that the spinal cord or brain has been injuriously influenced by this shock that has been impressed on the body."

Tangible injuries are usually self satisfying to the patient and receive a more or less favorable prognosis from the attending physician which relieves anxiety and apprehension; whereas the subject of an accident without evident injury will usually receive a doubtful prognosis even should he escape a "disquisition" upon "Railway Spine" and "its probable development and malignant consequences."

Regarding "Traumatic Neurasthenia," Dana says:—"Careful research, however, often tends to elicit the fact that previous to the injury, the patient was an alcoholic, syphilitic or neurotic and perhaps already had the beginning of the alleged traumatic disorder."

The theory of a distinctive traumatic neurosis has certainly received its death knell, as even Oppenheim, the father of "Traumatic Neurosis" *sui generis*, according to Dr. de Jacobson,[2] has yielded to the philosophical deductions of Charcot, Gilles de la Tourette and others of the Salpetriere school." In other words, the French school has convinced the German school that neurotic disturbances following railroad accidents are not new nervous diseases, as previously taught by Oppenheim, but that the shock attending railroad accidents simply brings forth the ordinary symptoms which manifest a neurotic diathesis.

Late editions of Oppenheim's work on nervous diseases evidence this change of faith.

J. Mitchell Clarke, in his late work on hysteria and neurasthenia, writes that the symptoms of traumatic hysteria and neurasthenia "are identical with those which are met with in cases due to other causes," and expresses the belief that "in those cases in which neurasthenia follows upon a slight personal accident, unattended with circumstances which provoke terror, ... it will rarely be found that the patient's health was altogether satisfactory for some time antecedent to the accident."

Berkeley writes that "It must be conceded that the hereditary taint is the all-important factor, and that the constitutional disturbances, trauma, intoxication, or other conditions, are after all in the majority of examples only provocative agents.

"A sound nervous system is an inheritance that only the most strenuous provocation can overturn for any length of time, and even

when an upset has been accomplished, a restitution to the normal is soon obtained under favorable circumstances."

While neurasthenia is not infrequently found after accidents, it is doubtful if trauma is ever the primary and sole cause of the disease; however, since claimants allege it; defendants concede (or acquiesce in) it, and courts sustain it; we will not now refute it.

In the production of post traumatic neuroses, "trauma acts, first by its effects on the mind (psychical traumatism); second, by its effects on the body which anchors the attention on one point.[3]

Winslow,[4] many years ago, wrote, "How much of self-created bodily suffering, voluntarily courted physical pain, zealously trained, distressing disease of the mind, arise from lengthened anxiety and continuous fret and worry as to the state of the corporeal and mental health. The increasing dread of the presence, and constant morbid anticipation of approaching disease, whether bodily or mental, very frequently creates the mischief so much anticipated, and so greatly apprehended."

Tuke[5] wrote, "There is no sensation, whether general or special, excited by agents acting upon the body from without, which cannot be excited also from within by emotional states affecting the sensory ganglia; such sensations being referred by the mind to the point at which the nerve terminates in the body."

Thus the feeling of hunger and the appetite for food, is represented in the stomachic branches of the vagus and the cerebral centers of the same, and as local conditions of the stomach may destroy or increase the feeling of hunger, so central disease may give rise to sitophobia or bulimia. Simililarly, vomiting may be caused either by disease of the vagus center of the medulla, the psychical centers of the brain, or to local disease or irritation of the stomach. Normally, afferent sensations are being continually received by the brain from the various tissues and organs, and efferent (regulating) motor impulses, returned—all subconsciously, until a hyperaesthetic cerebral state or expectant attention brings into full consciousness these normal organic (cenesthetic) sensations, which misinterpreted as evidences of diseases, lead to apprehension, worry, etc., from which follows the usual vicious cycle of action and reaction until disease is establised.

We have given a resume of the histology of the nervous system, reviewed the etiology and development of normal and pathological fatigue and attempted to explain and illustrate the possible effects of physical injuries and emotional states upon the development of disease, believing thereby to prepare us for the consideration and better understanding of neurasthenia in its various phases.

That there is often a wide difference in the symptoms of different cases of neurasthenia, does not depend upon its cause, but to the broad application of the term, which includes every degree of func-

tional weakness, and consequent irritability or languor of brain cells, between fatigue and true insanity, as well as to the multiplicity of functions of the organ effected.

It would be a wonder indeed did not an organ of so many and such varied functions, present, when disordered, a great variety of symptoms, so that while there may be symptoms common to most cases, each case has symptoms peculiar to the portion or portions of the brain more especially involved. Moreover, although neurasthenia may in its incipiency be confined to a limited area, through the association and interdependence of the neurons, the condition may extend until practically the entire nervous system is involved.

Even the earlier classification of Beard (who coined the term neurasthenia) into cerebral, spinal (spinal irritation), gastric, sexual, etc. has been abandoned, so that now all cases of functional "overtire" of the nervous system, irrespective of the cause, location, degree or intensity, are classed under the generic term, neurasthenia, the pathology of which depends solely upon the stage and degree of nerve-cell involvement.

Through experimentations upon the lower animals, Hodge gives the following pathological changes in neurasthenia:—

"The cell nucleus is shrunken, displaced within the cell and bounded by an irregular, jagged edge. Vacuolation appears within the cell protoplasm from loss of substance through activity—the cell tires rapidly, at first, then more gradually, until exhausted.

"The axone and dendrites share in the pathological processes within the cell body, showing similar evidences of degeneration."

In conclusion, we find practically no evidence, and certainly no precedent in the broad domain of medicine, for the assumption that traumatic neurasthenia differs pathologically from nuerasthenia developing from other causes, or idiopathically.

"Traumatic" neurasthenia perhaps is complicated more often with hysteria and hypochondriasis, though these are frequent accompaniments of idiopathic neurasthenia; nor is the frequent factor of anxiety for financial reimbursement a distinguishing mark of the traumatic variety, since it does not differ from the various emotional states which are often present in the idiopathic form, either as cause or consequence.

In a private letter, Dr. Mettler, author of a recent excellent textbook on Nervous Diseases, says:—

"I am one that believes that 'traumatic' differs from 'idiopathic' neuroses (hysteria and neurasthenia—especially) only in a medico-legal sense; they are both the same, with the exception that the former (traumatic) usually, or very often, are court cases and are complicated by the question of damages. Hence, I do not discuss traumatic hysteria or neurasthenia as a distinct and unique condition.

"In a word," he continues "the traumatic troubles are either pure-

ly medical or purely medico-legal questions. Medically, they are well known conditions, and are always the same, both in and out of court. I think this ought always to be insisted upon by the 'expert' on the stand, and the counsel ought not to be allowed to confuse the medical question and cast doubt upon well established medical lore by striving to show that traumatic neuroses (seeking damages) are a sort of distinct, separate and unique troubles apart from other forms of neuroses."

Dr. Mettler expresses in plain and clear language, if generalized, the modern conception of disease, viz:—that the pathological findings of any given disease will not vary with the exciting cause, e. g., under the same conditions, an inflammation excited by traumatism is the same as one originating idiopathically.

Neuroses, as well as organic conditions, following trauma will therefore have the same symptoms, pathology and prognosis as the same diseases originating idiopathically; but symptoms vary much in different cases of the same disease, even when due to exactly the same cause.

Physical injuries and organic diseases of the nervous system usually present diagnostic objective symptoms by which to differentiate them from the neuroses.

The prognosis of neurasthenia is good—all degrees short of exhaustion, are amenable to treatment. Fatal terminations are rare, and then certainly due to delayed or inadequate treatment, which sometimes occurs, as it is often impossible to convince a neurasthenic of impending disaster until too late to prevent collapse, which "seldom comes like a thunderbolt out of a clear sky;" on the contrary, to the practical clinician, like all "coming events," it "casts its shadow before," and usually, a long time before.

Other things being equal, the more acute the onset, the less the predisposition, the milder the emotional involvement, and the earlier systematic, radical treatment is instituted, the better the prognosis and the shorter and less eventful its course.

The period of necessary professional observation and treatment to restore the neurons to a stable condition, usually appears to the patient and neurological tyro unnecessarily prolonged. Insufficient treatment accounts for most of the relapses and recurrences. I might have said "all," were it not true that they do sometimes result from the same causes which occasioned the previous attack, though the average individual profits by one experience with a "deeply rooted" neurasthenia.

I have observed recoveries in cases of all periods of duration up to thirty-three years.

Patients in whom the diseases has existed many years may not have the endurance they would otherwise have had, though life is rarely shortened.

Beard said, that "Neurasthenics would have a long and happy old age."

Dana says, "They pass through the valley of the shadow of death, but the experience may be a profitable, if not a pleasant one."

In treating neurasthenics the physician must ever bear in mind that he is dealing with a "deficit of nerve capital"—even bankruptcy—to regain which, anabolism must exceed catabolism.

After we have restored our patient's physical condition, we are occasionally chagrined to find him, like "one convinced against his will," "of the same opinion still,"—viz:—he is "not well," or "does not feel right." On this point, we can do no better than to quote from Dr. Cowles,[6] who says:

"The nervous invalid may remain such, even under strongly recuperative tendencies, simply from mental habit, confirming it both by misuse and disuse of the normal power. The patient, powerless to contend alone against the forces of weakness and habit, must have a physician for both mind and body."

These are the cases which above all others, require the highest degree of judgment, tact, skill and resourcefulness to fully restore to a healthy mental tone.

Linmar Building.

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PATHOLOGY OF PELVIC INFLAMMATION.*

BY T. J. BEATTIE, M. D., KANSAS CITY, MO.

The subject of pelvic inflammation is an exceedingly complex one and has furnished a fertile field for discussion. It is interesting to glance through the literature of a few years ago when Hewitt, West, Simpson, Sims, and other able men were writing upon this subject. During their time there seemed to be little doubt as to its true pathology. They claimed, and their opinions were almost universal, that the lesion was in the cellular tissue, but by the able investigations of Matthew, Duncan, Barnes, and others and by the advent of abdominal surgery, a very large percentage of inflammatory affections of the pelvis were found to be due to changes in the peritoneum, and cellulitis was looked upon as comparatively rare.

Today it is quite generally conceded that both cellulitis and peritonitis do occur and they have their separate places in pelvic pathology. The large percentage of cases are due to bacterial invasion, and the infection may spread, first by continuity of mucosa,

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second, lymphatics, third, blood vessels; they are not infrequently sequalae or complications of pre-existing inflammatory diseases. The cases that are caused by continuity of mucosa are principally gonorrheal, tubercular or from staphylococcus infection. When the inflammation occurs by continuity the peritoneum is more likely to be the structure affected. It is in these cases that the tubes and ovaries are found to be involved and you will more frequently find it bilateral. Gilliam and other prominent writers claim that in cellulitis the invasion is usually by the lymphatics. The essential cause is the streptococci, staphylococci and bacterium coli, never arising from gonococci infection. These are the cases that so frequently follow confinements, abortions or injuries. When peritonitis exists you will find changes going on in the tubes.

In 1876 Neoggerath, then of New York, astonished the world by his article entitled "Latent Gonorrhea in the Female." He claimed that no well-marked case of gonorrhea in the male was ever cured.

Its chief characteristic is in its lasting vitality long after apparently cured. It may remain inactive in the mucous membrane liable even while quiescent in one to be communicated to another. This is why previously healthy women soon after marriage begin to complain of symptoms so common in pelvic diseases.

Sanger claims that 25 per cent. of his hospital and private patients have gonorrhea; some observers place the average even much higher but these are probably taken from clinics and are largely made up of prostitutes. Often cases of pelvic disease will develop insidiously, without any marked symptoms, and only after careful physical examination will the true condition be detected. This is explained by the vagina being covered by pavement epithelium relatively smooth, like skin, and supplied by acid secretion. Bacteria are not so likely to lodge here and the acid medium is unfavorable to the growth of 90 per cent. of bacteria. This is not the case in the uterus. The endometrium is especially susceptible on account of the arrangement and thinness of the epithelial covering; by this arrangement the uterus is apt to receive, retain and distribute infection.

The fallopian tubes are anatomically continuous with the uterus, and are in direct communication with the ovaries and peritoneum. Infection may reach these structures and the symptoms be very slight. Until the symptoms of tubal and ovarian disease manifest themselves, we may get accumulations of pus in the tube and marked symptoms, perhaps chill, fever, pain, swelling and the clinical symptoms clearly outlined, but the majority of cases of pelvic inflammation present symptoms that in themselves are misleading, having come on so gradually and presenting a mild form until the patients drift into invalidism. They consult a physician for leucorrhoea, menstrual derangements or some other condition that is only one of

the train of symptoms that so often accompany pelvic inflammation. I have under my care at the present time a patient who gives a history of chronic invalidism for nine years, having consulted a number of physicians and having been treated by them. Physical examination clearly revealed an accumulation of pus in both tubes.

An accumulation of pus in the tube may give very little trouble; by being retained hermetically sealed it may become transformed into serum by spontaneous destruction of the germs, the phlegmonous process come to an end, or the serum increased in quantity and form hydrosalpinx. It is now conceded by the best authorities that hydrosalpinx is always secondary to inflammatory changes in the tubes. The changes that take place in the vessels of an old diseased tube may give rise to a condition known as hæmato-salpinx, and the same may be said of complications occurring in the ovaries.

In the large percentage of inflammatory conditions of the tube you have changes going on in the peritoneum; nature throws out its safeguards to prevent further involvement and you have the tube and possibly the ovary adherent to the surrounding structures, curled, or bent or twisted, upon itself. You will often find adhesions binding the uterus firmly to the surrounding structures but if it is tubal you will find the exudate back of the broad ligaments.

Cases of endometritis complicated by adhesions should be looked upon in a more serious manner than they are by some physicians. Some months ago I was called by a physician to see a case of acute general peritonitis the history of the case showing that she had come to this city and consulted him. She had symptoms of endometritis, characterized by purulent discharge from the endometrium and frequent and quite profuse menses.

The doctor curetted his patient and in 48 hours symptoms of pelvic peritonitis, and then more diffuse peritonitis, developed. When I was called she was in a very dangerous condition, pulse 135, temperature 104.2. Physical examination per vaginam showed distinctly a pocket of pus which was opened and drained through the vagina. She recovered from this attack but has never returned for further examination. Office manipulations and endometrial applications in these cases are always dangerous.

Pelvic Cellulitis.—This condition *occurs much less frequently and* according to our best writers *the invasion* is principally by the lymphatics. It occurs in the lower strata around the vagina and neck of the uterus and in the folds of the broad ligaments. To distinguish it from peritonitis, Nonat described it as periuterine and lateral phlegmon, Churchill as pelvic abscess. Virchow claimed that the other names suggested, did not indicate the difference between peritonitis and subperitoneal disease and suggested the name of parametritis.

In some cases following childbirth, abortion or any injury to

the genital tract, there may be quite an infiltration in the tissues and some temperature which will give the attending physician great anxiety; but the process runs its entire course in a few days. Dr. T. A. Emmett, in an article read before the American Gynecological Society, said: "It is a matter of common observation that this form of pelvic inflammation tends rapidly to resolution, and the tissues soon regain a healthy state, if septic poisoning does not take place. There is always more or less injury to the mucous membrane and soft parts, and unless we are extremely cautious in our methods of cleanliness we are liable to infect our patients and the cellular tissue become the seat of an extensive suppurating mass, when no involvement of the tubes whatever occurs." The following case came under my care:

Mrs. F., age, 27, married four years, one child 3 months old, good family history. Parents still living, healthy and well. Prior to her marriage regular in her menses, but experiencing some discomfort before the flow occurred; it was without pain. During the early months of her pregnancy she was exceptionally well. Her baby was born April 22, 1903. She did not use vaginal douches; the lochial discharge was scanty and very light in color, after the first two days. She said she had not felt well since her confinement and at the time she consulted me had lost 30 lbs. Her labor was severe lasting about 16 hours, she did not know that she had any temperature following her confinement; she did not feel well, or regain her strength afterwards. Felt weak, no appetite, dull aching pain through the abdomen and back, severe pain on left side, low down. She attempted to sit up three weeks after her confinement but was too weak. As time passed her symptoms became more severe; she had some fever in the afternoons and was unable to nurse her baby. When she consulted me she presented the picture of one suffering from some disease that was fast sapping away her vitality. She was pale, anemic, and in her attempts to be around she unconsiously placed her hands on her hips. She was able to be around her room a short time in the mornings, but as night approached she felt weak and feverish and during the night would perspire profusely. She had a temperature of 102, pulse 100; this was about the middle of the day. Upon physical examination I found the perineal body injured, slight laceration of cervix and the uterus bound down by adhesions. By manual examination I revealed, on the left side, a mass that presented the shape and outline similar to a pus tube, but higher up and more to the left side than we usually find collections of pus in the pelvis. I advised operation by opening the abdomen, fearing that a suppuration dermoid, or some form of growth was present which would be difficult to remove through the vagina. Operation was performed July 27th. Upon by opening the abdomen, fearing that a suppurative dermoid, or

proved to be a fold of omentum about 1½ inches in thickness extending to the right side. This was plastic material to protect the peritoneal cavity. It was extremely interesting to see how nature had thrown out this protection; the tube, ovaries and cellular tissue were matted together; there was no distension of the tubes. I did not disturb the plastic material but mopped out the pus and packed the pelvis with guaze. This I think is a case of cellulitis; the infection was through the lymphatics and suppuration occurred. The tubes and ovaries were in a healthy condition. She made a complete recovery.

EARTIRE AS A FACTOR IN DISEASE.*

BY E. H. MUSSON, M. D., NORBORNE, MO.

As physicians, we are agreed that the great host of trying nervous cases is ever increasing. Its members haunt our offices, yea, even our footsteps, and many go to swell the ranks of the victims of the fakir and the quack. Their symptoms are legion and the names we give them are often convenient "somethings" by which to eliminate one unknown with another—neurasthenia, nervous irritability and reflex ailments whose scope is coincident with the range of the nervous system itself. Lacking a tangible pathology, their study is often abandoned for that with the miscroscope and scalpel. Nevertheless, they are always with us and the general practitioner is the one who must heed their clamor for relief.

Anything which might help to resolve these complex ills into their elements and further clarify our knowledge, would seem to be worth our while. The relation of *sound*, more especially *noise*, to functional nervous disease, is a field of study which has scarcely received its share of attention.

Of all the organs of special sense, the auditory apparatus is second in point of importance in development, structure and function. The terminations of the auditory nerve serve a purpose similar to that of the retina. The two muscles of the middle ear, the tensor tympani and stapedius, perform a sort of accommodative act. The primary and secondary centres in the brain involve a considerable of cerebral structure.

There is now no doubt of the important causal relation between unrelieved eyestrain and many cases of headache, nerve-exhaustion, "brain-fag," so-called "nervous dyspepsia," and even spinal curvature. The revelations which have come through the thought-provoking work of Dr. Gould and others, emphasize again and again the marvelous inter-dependence of all parts of the nervous system.

Noting the success of the oculist with his two little pieces of

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glass, after the patient has gone the round of analgesics, cathartics, and stomachics, a seemingly plausible question suggests itself, viz.: May there not be an analogous condition of fatigue of the auditory apparatus with important reflex manifestations? For this as a clinical entity, the term "Eartire" has been proposed.

Is it not possible that mal-adjustment of muscles or ossicles may give rise to strain akin to that caused by refractive error? Is it not possible that the long continued registration of unrythmical sounds by even a *normally* adjusted ear may greatly fatigue the cerebral auditory centres and have something to do in the causation of neurasthenia, headache, insomnia, etc.?

In the eye, slight variations from exact anatomical relations are of immense importance and we are told that deviations which can be measured by the thickness of a sheet of paper may be of much consequence. Theoretically, at least, it seems entirely possible that there is such a thing as a distinct fatigue neurosis of auditory origin. Furthermore, that individual susceptibility to auditory impressions may vary greatly. To touch again on the analogy we are trying to follow—we are all aware that one person may go through life with a high degree of refractive error without much discomfort whilst another is made miserable by half a diopter of similar astigmatism.

The relation of the multiplicity of noisy machinery to nerve-exhaustion and allied disorders is worthy of some study. These evidences of modern progress have invaded our whole country, even to the farm-house and hamlet. That there is some subtle, but nevertheless, profound wear of the higher nerve centers from this cause is highly probable and its effects may be more far-reaching than we imagine. The study of eyestrain followed in the wake of the printer and the schoolmaster and may not *eartire* demand our consideration as a concomitant of our noisy environment?

Let us view the subject in another way. Sounds in rythmical succession become music—the antithesis of noise, crudely speaking. The therapeutic value of music—its restfulness to the nervous system, is well recognized. Its importance in hospitals and sanitariums is very great—alienists tell us of its value in asylums for the insane—we are told that it will even "soothe the savage breast." Surely the injurious effects of noise may be as great as that of music is salutary.

It is difficult by any means now at our disposal, to demonstrate clearly the weight to be given *Eartire*—to disassociate it from other elements of fatigue, as has been done in case of eyestrain. However, its importance has long been tacitly recognized. A long list of facts might be cited which seem to support the belief in the profound effects of *Eartire*. We guard from noise, our patients acutely ill, lest there should be added a source of nervous exhaustion which

would determine a fatal outcome. With life worn to a thread we use all means to preserve the integrity of the nervous system and perfect quiet seems to aid greatly in husbanding the low supply of vital energy.

Neurologists insist on perfect quiet in many instances. Much is said of rest and "rest cures," but is it not highly probable that quiet plays a more important role in the cure than is generally suspected? Hospitals and sanitariums are built in as quiet locations as possible, and were we able to resolve the problem of cure into its elements, we would likely find that simple quiet was a very potent factor.

The urban citizen seeks the country "far from the maddening crowd," for rest and change of air. Does not the freedom from noise which has continually assailed his ears, have much to do with his rejuvenation? A sort of a "silence cure," so to speak.

Brevity compels the omission of the reports of some cases which appear to confirm the notion of a distinct fatigue neurosis due to noise. Some further research along the line of the relation of sound to disease would seem to be justified. As far as I am aware, there is practically no literature at all on the subject. To facilitate the collection of data I have formulated some questions which can be submitted to patients, but must omit them here.

A therapeutic hint or two—intervals of perfect quiet, may serve in lieu of sedatives or even analgesics. Removal of some patients from noisy surroundings will answer for sanitarium treatment.

As general practitioners we ought to give more pain-taking study to causes and cure of functional nervous disease and this will help us to defeat many parasites of our profession, in this, their great stronghold.

My whole theme no doubt seems simple, but simple things are often tardily appreciated. It is well enough to recall the historical fact that the world was very slow to believe the truth about unrelieved eyestrain.

In conclusion let me add that this is submitted to you with several interrogation marks, but with the belief that it contains some hints of truth which may be of value to those accustomed to noting carefully the psychic and nervous phenomona of their patients.

VALVULAR LESIONS OF THE HEART, SOME OF THE CAUSES, AND PROGNOSIS.*

BY R. G. DAVENPORT, M. D., TRENTON, MISSOURI.

In speaking of diseases of the heart, I do not hope to advance new thoughts, but rather refreshen our memories with some of the diseases this organ suffers. I think if we will hold in our imagination, three distinct departments in considering the heart; namely the cause, seat of lesion, and probable termination, our line of treatment and prognosis will be easily decided upon. When we are consulted for some abnormal condition of the heart, it seems to me, we should ask ourselves: what is the origin of the disease, what particular part of the heart is affected, and what is the condition of the system taken as a whole?

Under the first question of the origin of the disease, we have rheumatism, pneumonia, atheroma, syphilis, eruptive fevers, psychoneurosis, etc. If the patient under observation at some future time has suffered an acute attack of rheumatism of severity and suffers more or less with that malady, we can feel reasonably confident the disturbed valve or stenosed opening is due to an endo-carditis as a result of rheumatism. If we have determined the origin rheumatic, the treatment consists of antirheumatics, and if valvular compensation is established, our prognosis is favorable, providing the patient does not suffer an acute attack of rheumatism.

Atheroma is an insidious disease usually secondary, and chiefly in middle and latter life; its seat of primary operation is the ascending arch of the aorta, and is progressive in destroying the inner muscular fibers, rendering the vessels inelastic, and the patient's condition perilous under abnormal exercise.

From its seat of election, we would naturally expect the aortic valve or orifice to become affected, and the extension into the coronary arteries producing fatty degeneration; especially is this the case past the age of thirty-five without compensation, when our prognosis would be very unfavorable. Syphilis has been described by many writers as affecting the valves rendering life very insecure; hence if our origin has been determined syphilitic, the prognosis is always unfavorable.

Eruptive diseases in childhood producing endo-carditis are as significant of resulting valvular lesions, as the ears of a child suffers lesions with the vault of the pharynx full of adenoid vegetations. Lesions wrought at this age are usually favorable, as in many instances, compensation is so complete, the subject is not cognizant of

*Read before the Grundy County Medical Society, Trenton, Mo., April 10, 1906.

its existence until ascertained by the doctor, on applying for insurance, etc.

Pneumonia producing endo-carditis is a dangerous condition as statistics have shown the aortic orifice is most frequently affected. It would seem the mitral valve would be the one since the pneumococci are first in the left auricle, then ventricle, which is doubtlessly the primary seat of endo-carditis in pneumonia. It is very significant that diseases of the lungs are exciting factors in producing endo-carditis from the fact that the left side of the heart is affected many times over that of the right side, hence in all acute inflammatory infectious conditions, it behooves the physician to watch and protect the heart. I would like to ask in your experience what per cent of pneumonias recover with a mitral incompetency. Our best physiologists divides the heart's cycic time into two-tenths for auricular systole, four-tenths for ventricular systole and four-tenths for diastole; you see the aortic valve is closed during diastole or four-tenths and auricular systole two-tenths; hence a partial explanation for the pneumococci attacking the aortic valve first, is that the aortic valve is closed six-tenths of the heart's cycic time and the mitral only four-tenths, giving the organism more time for invasion. Psychic irritation of the vagus nerve slows the heart thirty-five per cent. of its output, as has been demonstrated clinically. Each of us is cognizant of the potency mental phenomena have over the physical, as is set forth in fainting, worry, etc. I offer as a suggestion, if a person is easily excited the tension of the nervous system would bring about a cantraction of the peripheral vascular system, increasing the amount of work upon the left heart very materially, and in such cases, we should have a hypertrophy of the left side minus a lesion. It is in these cases, we have difficulty in assigning the cause, unless the psychic irritation be cited. "Balfour speaks of the pathetic manner in which life is shortened every day by the petty troubles, anxieties, and worries, which are of daily occurrence, and which by continual inhibition, impairs the ventricular systole, and favors dilatation of the heart. There are few of us he says, who have been in the practise for even a short time, who have not had occasion to note the development of serious cardiac symptoms arising out of untoward domestic affairs, the worry of an unsuccessful business, or even the wear and tear of a too successful business, which has outgrown the physical powers of its manager." Under this cause our prognosis depends upon the extent of removing the susceptibility of psychic irritation, which is very obstinate.

In the second department of considering the seat of the lesion, we have tricuspid, pulmonic, mitral and aortic orifices to consider, each of which may be regurgitant, stenosed or both. If our lesion happens to be mitral incompetency of a rheumatic origin in early youth, we are safe in assuring the patient that he will experience little trouble so long as free of any condition producing endo-carditis, whether it be

rheumatism, pneumonia or any of the other conditions above mentioned.

If the lesion is mitral regurgitation, an extra effort upon the left ventricle to supply the systemic circulation is produced, and the regurgitant quantity into the left auricle dams back the pulmonary vein flow to the tissues of the lung, and from the tissues into the pulmonary arteries to the right ventricle, which cavity has a higher pressure that produces hypertrophy of the right side. When the hypertrophy is equalled on either side of the heart, under a mitral incompetency, we have compensation established, and the lesion is of little consequence, as it may never inconvenience life; however these patients should be instructed relative to the conditions that jeopardizes such a heart as exercise, stimulants, etc.

Now suppose we ascertain the origin to be syphilitic, we know, even though compensation may be established, the progressive destructiveness may destroy the valves at any time producing death. We also know our line of treatment would be quite different from the above condition, and our prognosis very grave.

If the lesion be due to atheromatous changes, and the patient in middle or later life, we can offer them very little, this is especially true, when the aortic orifice or valve is affected; hence if the lesion be aortic incompetency, the gravity of the condition depends more upon the invasion of the coronary arteries, producing fatty degeneration of the heart than the simple incompetency in this condition, age would be a factor in determining the cause.

We are told that aortic lesions are less favorable than mitral, that mitral stenosis is more unfavorable than incompetency. That tricuspid systolic murmurs is ominous because usually a manifestation of cardiac failure, but may disappear if the failing heart responds to remedies. Every woman with mitral stenosis should approach wedlock and especially motherhood with a degree of anxiety, on the part of her physician.

Dr. Whittaker says, "Pregnancy always aggravates organic heart disease," and the following heart specialists give their statistics of women suffering with heart lesions during pregnancy. Duroziez called attention to the menorrhagia which occurs in these cases, and which occur during the stage of gestation. Sterility is frequent, abortions are more common, sometimes in the very first days, but often as late as the seventh month; the frequency of premature birth has been especially marked by Porak, Duroziez and Budin. Porak in 1880 made observations of the principal events which occurred in ninety cases of heart disease during pregnancy. The condition was stationary twenty-one times, and was aggravated sixty-three times, temporarily forty-six, permanently fifty-nine times. The heart disease was aggravated by labor twelve times, improved during parturition twenty-seven times, during labor twice, during the puerperium

twenty-five times. Schlayer shows from the study of twenty-five cases, and studies also or cases in literature, that the danger of pregnancy and parturition do not depend upon the kind of valve lesion so much as upon the condition of the heart muscle; that is, upon the degree of compensation. Premature labor occurs more frequently in multiparæ than in primiparæ. The same thing is true of deaths. Two patients died in parturition, ten in puerperium all of whom were multiparæ. Of seventeen cases under the observation of Leyden, sixteen were lesions of mitral valves, and of these cases eleven died. Death occurs only rarely during pregnancy, more frequently during labor and most frequently shortly after delivery. The immediate cause of death is either oedema of the lungs or collapse of the heart. When the patient survives, she remains feeble for a long time or it is found that the compensation is broken.

Pulmonic murmurs of regurgitation or stenosis are very rare. Many writers contend that pulmonic incompetency is invariably associated with pulmonary tuberculosis. This incompetency would be conducive of a diminished blood supply to the lungs, hence the vitality lowered. The pulmonary valve offers one point of interest in being accentuated in mitral lesions, and at the onset of any pulmonary consolidation, as in pneumonia, tuberculosis, etc., that is, as long as the compensatory hypertrophy of the right ventricle lasts. It is only when this hypertrophy or the muscular walls begin to flag that the accentuation of this valve sound disappears. Tricuspid murmurs are more rare than pulmonary and especially stenosis, which is considered the rarest of heart lesions. The murmurs of the heart are of no little value in our forecasting other conditions in the human economy. Supposing a woman in the early stage of gestation consults you and she has mitral stenosis. Suppose a young man has suspected pulmonary tuberculosis and you find pulmonary incompetency. Suppose you are called to a case of pneumonia and find mitral insufficiency, what can we offer an asthmatic with a mitral murmur? What hope can we offer an elderly or middle aged person for that matter, whose vision is failing rapidly without apparent cause, but has aortic incompetency?

In dealing with all conditions of the body, we should insist on making a thorough examination of the heart, and unless the patient strips to the waist, and then auscultate each valve for pre and systolic or pre and diastolic murmurs, we are not doing ourselves or patients justice. It requires considerable practise to detect an aortic insufficiency or mitral stenosis, as the former murmur is prediastolic and the latter presystolic, but practise will enable anyone to do it.

We come to the last department or question of considering the system as a whole, and I mean by this, that if we have a strong, robust individual with a mitral incompetency of a rheumatic origin, and compensation is established free of precardial distress, we can give a

favorable prognosis invariably; whereas on the other hand, if the lesion is syphilitic in origin our prognosis is highly unfavorable. If the lesion is traced to some disease of childhood or endo-carditis, the general system is to be consulted as to dyspnœa, dropsy, Bright's disease and the probable flagging of the muscular walls of the heart bordering on dilatation.

Suppose we picture to ourselves another case in the early teens with a mitral lesion and compensation due to endo-carditis in pneumonia ordinarily developed physically and in good health. Little danger can attend a failure of the heart in this person unless overtaken by an acute condition of the lungs or endocardium; hence the forecast is favorable; whereas, on the other hand if the subject is anemic, has symptoms of oedema, even though in fair health, our prognosis is always attended with danger.

It is in chronic cardiac disease, more than in any other disease, we see the disease and repair in the balance of disability and compensation, which must be maintained in every damaged organ: if health has been disturbed its restoration is dependent on every condition and event of life, and a readjustment of all disobeyed natural laws.

The practitioner cannot hope to forecast altogether from the etiology and pathology alone, but largely by that knowledge of the individual man, and of the world that permits the practitioner to pick the roses on the plane of eminency.

THE JOINT MEDICAL COUNCIL AND MUNICIPAL HOSPITAL REFORM.*

BY JOHN GREEN, JR., M. D.

SECRETARY OF JOINT MEDICAL COUNCIL.

During the past ten years the Medical profession of St. Louis has been growing more and more aware of the glaring defects of the system under which, by the provisions of the Charter and ordinances, our city has been compelled to conduct its hospitals. Efforts have been made to remedy these defects, but, up to the present time, without success.

In 1905 every Medical Society in the City was invited by the Medical Society of City Hospital Alumni to join with it in a concerted effort to find a solution to this problem. Every Society invited responded enthusiastically and appointed delegates on the basis of one delegate to each one hundred members. These delegates, nineteen in number, representing Allopaths, Homeopaths, Eclectics and Dentists,

*Delivered February 19th, before a Joint Committee of the Council and House of Delegates in support of a bill authorizing the election of Freeholders to prepare a new charter for St. Louis.

organized the "Joint Medical Council," which body represents about fourteen hundred physicians and dentists. The Council set to work at once to determine in what respects the system operative locally was not abreast of the times.

A comparison with the systems in other American cities notably, Chicago, Cincinnati, New York, Boston, and New Orleans, revealed the startling and disconcerting fact that in no single respect did the St. Louis system accord with the fundamentals of good management in vogue elsewhere. We found that our system was utterly obsolete and had long since been discarded by communities one quarter the size of St. Louis.

Let us take for example the Cincinnati hospital, which fairly represents modern ideas of municipal hospital control, and compare it with the local system. In Cincinnati, control is vested in a Board of Trustees appointed by the Mayor. In St. Louis, control is vested in a single individual, the Health Commissioner. In Cincinnati, the care of the sick is entrusted to a large Medical staff representing the *specialties of medicine* and is appointed by the Board of Trustees. In St. Louis there is no provision for a medical staff and one does not exist. In Cincinnati the superintendent, who is appointed by the Board of Trustees, is the executive head of the hospital. He is not a physician and has nothing to do with the care of the sick. In St. Louis the superintendent is appointed by the Mayor. He is the Medical and Surgical as well as the executive head of the hospital. He is, in theory, responsible for the medical care of every patient. In Cincinnati, the internes or house physicians are appointed by the Board of trustees, after competitive examinations conducted by the Medical staff. In St. Louis the internes are appointed by the Health Commissioner after competitive examination conducted by the Board of Health. In Cincinnati, all the non-medical employees are appointed by the Board of Trustees. In St. Louis all the non-medical employees are appointed by the Health Commissioner.

The brief time at my disposal will not permit me to make other comparisons. Suffice it to say that after careful study the Joint Medical Council has concluded that the most glaring defects of the local system are as follows:

(1) The intimate association of two departments inherently distinct—the Health Department and Hospital Department.

(2) The vesting of control over all hospitals in a single individual—the Health Commissioner.

(3) The requirement that the Medical and Surgical superintendent shall be at the same time the executive head of the hospital.

(4) The lack of a Medical staff of experienced physicians and surgeons representing the various specialties.

(5) The failure of the institution to subserve its proper function in the sphere of medical education and medical research.

(6) The Failure of this institution to give the patients a medical care equivalent to what they receive in similar institutions in other cities.

It was at first thought that new ordinances framed in the light of modern medical enlightment might suffice to overcome these defects, but closer investigation revealed the fact that the root of the evil lay in Art. XII. Sec. 5 of the City Charter, which unequivocally declares that the Health Commissioner shall have charge of all City hospitals and make all necessary rules for their government, etc.

It is thus seen that the Charter itself is the chain linking the Health Department to the Hospital Department, and that the Charter itself must be changed to permit the creation of a scheme of organization in consonance with modern ideas of city hospital control.

The labors of the Joint Medical Council have, therefore, been devoted to preparing an amendment to Art. XII. Sec. 5, of the City Charter. The draft, as finally agreed upon, was referred back to the Societies represented and received the unanimous endorsement of each and every one. Its principal features are as follows:

(1) A provision that the Hospital Department shall be absolutely separate from the Health Department.

(2) That the new Hospital Department shall be managed, directed and controlled by a Board of Trustees.

(3) That control over the hospitals, Insane Asylum and Poor House shall be vested in this Board of Trustees.

(4) That this Board shall consist of six citizens, together with the Mayor ex-officio. Said Board to be elected on a general ticket.

(5) That the Board shall establish rules and regulations for the institutions, shall appoint and remove employees, shall appoint a Medical staff of attending and consulting physicians and surgeons who shall serve for a term of two years, shall appoint internes on nomination by the Medical staff on the basis of competitive examination conducted by the staff, shall elect annually for each of the hospitals a superintendent whose duties shall be of a general administrative and executive, but non-medical character.

It is not necessary to remind you of the frightful way in which our municipal hospitals have been prostituted to political ends. The more they have decreased in efficiency as institutions for the care of the sick the more have they become valuable political assets. We have been assured that our municipal hospitals have become so firmly imbedded in the political life of the city that to dislodge them would be truly a Herculean task and one well nigh impossible. We are not so pessimistic. We believe that when the citizens of St. Louis realize, that, as tax-payers, they are not receiving from these institutions an adequate return for moneys expended, that the physicians of the City are deprived of the high privilege of ministering to the City's charges, that the sick poor are not receiving the medical care to which they are

rightly entitled, they will demand, in no uncertain tones, that the present system be changed. We believe that all right minded citizens will voice the feeling expressed by Mr. John Fehrenbatch, Superintendent of the Cincinnati hospital, "that in the name of common decency and humanity, politics in any guise should not for one instant be tolerated in institutions where human health and human life are at stake."

"APPENDICITIS."

Appendicitis is now the style.
Get it my friend and try it a while.
The operation is awfully nice,
And all that hurts is the doctor's price.
But these little things are worth the while
When your appendix gets into style.

The anesthetic I liked the best
Cause you go to sleep and get some rest
And that's all the rest you get for a while
When your appendix gets into style.

Flat on your back you have to lie
Survive or perish, live or die.
But these little things are all worth while
When your appendix gets into style.

Nasty doses you'll have to take
And you must endure the stomachache,
But the thing that rejoices you most of all
Is to have your appendix in alcohol.
Now these little things are all worth while
When your appendix comes into style.

—*Anonymous.*

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E. J. GOODWIN, M. D., Editor.

Publication Committee.

C. M. NICHOLSON, WALTER B. DORSETT. B. M. HYPES. W. G. MOORE.

EDITORIAL.

THE POST-DISPATCH AND MEDICAL LAWS.

The *Post-Dispatch* takes occasion to raise a puerile cry against the passage of the medical practice act, now before the House of Representatives. In no uncertain terms it accuses the medical profession of an attempt to monopolize fees for medical services, and asserts that the bill is drawn, not in the interests of the public but for the material benefit of practitioners of medicine. With much gravity it advocates the passage of strict State laws to govern the acts of those persons who spend from four to six years in medical colleges and post-graduate work in preparing themselves for a life of sacrifice and labor to alleviate the sufferings of mankind, and who believe and teach that drugs and the knife are useful instruments in their work; that doctors of medicine should be required by statute to demonstrate their fitness to practice their profession and none but competent persons in the medical fraternity should be permitted to administer drugs or use the knife in the care and treatment of the sick. Having done this and having provided wise sanitary laws, the *Post-Dispatch* tells us, the State has done its whole duty. All other persons who choose to do so, should be permitted to treat the sick, unhampered by troublesome legal restrictions.

In other words the *Post-Dispatch* would have the State admit within its borders all the fakers, charlatans, faith curers, drugless healers, manipulators, mesmerists, and what not, legalize their acts, give them every privilege to extort money from the sick and afflicted by extravagant promises of positive cure, and permit them to treat the sick and afflicted, if only they will eschew the use of drugs and discard the knife.

Upon the medical professions rests the responsibility of protecting the public from the ravages of disease and they should be clothed

with every necessary power to enable them to do this. No set of therapeutic nihilists could be trusted with this grave duty. And no system of healing which ignores the study of physiology, anatomy, chemistry, diagnosis, therapeutics, pathology and bacteriology, should be leigtimatized in this State.

The medical profession makes no complaint of any person who desires to be treated without drugs, or chooses to endure an affliction which the knife would relieve. He who chooses to lie down and die rather than take drugs, or submit to a surgical operation, for relief, may do so, with or without the attendance of a drugless, knifeless assistant, and no physician will enter a protest. But the medical profession has very proper grounds for objection and does most strenuously object to the legalizing of persons to practice any system of healing as a profession unless those persons have a thorough knowledge of the body in health and in disease, and prove themselves competent in the application of this knowledge.

Since writing the above the medical practice act has been passed by the House of Representatives and is now ready for the Governor's signature. It will become a law sixty days after being signed.

THE PATHOLOGICAL EXHIBIT.

On February 9th, 1907, twelve men, representing the special committees on pathology from various medical societies and schools, met in the board room of the St. Louis Medical Society. The following will form the nucleus of the Pathological Exhibit which is to be the new feature of the scientific work at the coming State Meeting:

The Committee of the St. Louis Medical Society will endeavor to present a comprehensive picture of the malignant growths showing the pathology in gross and in microscopic specimens, and illustrations.

The St. Louis University will make an exhibit of anatomical specimens and dissections based on the collection which took the prize at the St. Louis World's Fair.

The Washington University Committee promises a comprehensive exhibit of lesions of tuberculosis in general.

The College of Physicians and Surgeons of St. Louis will exhibit its splendid collection of ophthalmological specimens, both normal and pathological.

The Jackson County Medical Society will present specimens of hypernephroma.

The Barnes Medical College will have an exhibit, the nature of which is now under discussion.

Professor Jackson of the University of Missouri will exhibit wax reconstructions of the embryo and embryonic organs. Professor Green will exhibit tracings made in the physiological laboratory.

Dr. Herman von Schrenk has consented to present an exhibit

and address the Association on Plant Pathology.

The exhibit will include microscopic and lantern slide demonstrations. The committee has heard from a number of men from all over the state, and it is ready to hear from others who have specimens that might be desirable to enter in the exhibit. Arrangements will be made for the safe-guarding of all specimens and apparatus exhibited during the progress of the meeting, and the Program Committee guarantees that every reasonable protection will be afforded against damage or lose.

THE PROGRAM.

On another page we publish the program for the next annual meeting at Jefferson City. This represents all the papers that have been promised up to this time. We anticipate that there are a number of other members who will read papers, and we urge upon them to inform the secretary at the earliest possible date of their intention and announce the title of their paper. Next month we shall publish the full program of the meeting and it is hoped that every member who desires to read a paper before the meeting of Jefferson City, will send the title of his paper so that it can be published in the next issue of the Journal.

The pathologic exhibit promises to be an interesting and instructive feature of the meeting. An announcement of the preparations thus far made will be found on another page of this issue.

A list of the Delegates elected by the various societies as far as reported up to the time of going to press is published on the page following the list of papers to be read. All Societies that have not yet elected their Delegates should do so at their next meeting and send the name and address of the Delegate to the State Secretary.

The members of Cole County Medical Society constitute the Committee of Arrangement. All those who attended the last meeting of the Association will recall with much pleasure the splendid manner in which the members were entertained at the meeting in 1906, and for those who attend the 1907 meeting we can promise that every attention will be given to their comfort and enjoyment during the meeting.

SMALLPOX AT JEFFERSON CITY.

An epidemic of smallpox in Jefferson City caused considerable excitement among the citizens and visitors for a few days. Exaggerated newspaper reports and unfounded local rumors spread considerable alarm among the members of the Legislature and for a while there was some talk of adjourning the session to another city, particularly after it was known that several members and employees of the House had been stricken with the disease. The state board of health was called to Jefferson City but they found that the local au-

thorities had instituted proper measures to prevent the further spread of the disease. However, all places of amusement were ordered closed and large public gatherings were prohibited as a special precautionary measure, and a quarantine hospital was established.

The epidemic is of a mild character: no deaths have occurred and those who were attacked with the disease were not seriously ill. About thirty-six cases have been reported.

The outbreak serves to emphasize the need of county boards of health. In such a time the health officer is necessarily greatly overworked and unless he be a man of unusual ability, sound judgment and prompt in action, the situation might easily get beyond his control. An efficient board of health in every county, working under the control of the state board of health, would be a great aid in safe-guarding the health of the community.

WEBSTER COUNTY ORGANIZED.

Through the efforts of Dr. T. A. Coffelt, Councillor for the 25th District, Webster County was organized on February 27th. This leaves but two counties unorganized in the 25th District. Dr. Coffelt is to be congratulated upon the effective work he has done in the 25th District since his appointment as Councillor.

Webster County comes into the Society with twelve charter members. Their names and addresses will be published as soon as we receive them. The officers are as follows: President, H. Highfill, Marshfield; vice-president, Wm. J. Rebenau, Fordland; secretary, Wm. R. Beattie, Rogersville; treasurer, E. N. Bailey, Elkland.

PENNSYLVANIA RAISES THE REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOL.

Recognizing the advantages of a broader general education and the growing necessity of the prospective student having in addition special preparation for the study of medicine, the Board of Trustees of the University of Pennsylvania has decided recently to raise the requirements for admission to its medical school. These requirements include two years of general college training and in addition a certain knowledge of biology, chemistry and physics. According to the plan which has been adopted, the standard will be raised gradually, beginning with the academic year 1908-1909 and reaching the maximum 1910-1911.

OBITUARY.

DR. BENJAMIN GIVENS DYSART.

Dr. B. G. Dysart was born in Randolph County, Missouri, in 1838. He was the son of Hon. Nicholas G. Dysart, one of the pioneer citizens of this state. He received his early education in the common schools of the county and finished in the college of the Presbyterian church, of which he was the faithful physician and surgeon after his return from the Confederate Army in 1865. He began the study of medicine in 1856 under the guidance of Dr. Richard Kayte Lewis, an eminent physician of North Missouri. After his studies under Dr. Lewis were completed he entered Jefferson Medical graduating in 1859.

When in 1861, "the loud tocsin of war tolled its first alarm," Dr. Dysart entered the service of the South and continued therein until the Appomatox of 1865. He was Brigade Surgeon on Gen. Cockrell's staff. On all battlefields he displayed skill and energy in the care of the wounded, faithfully administering to those of both armies. He was brave, vigilant, fearless, prudent and conservative in all his attentions.

As President of the State Board of Health and also when Surgeon General of Missouri, he was prompt and punctual in the discharge of his official duties. As a civil surgeon his professional brethren all over the state will remember his timely aid and assistance. In consultation he was always safe, sensible and reliable. The worthy and needy poor never had a warmer or truer friend. As a father, husband, citizen, neighbor and Christian he was all that one could ask or expect. He died at his post of duty in Paris, Mo., loved and honored by all.

C. W. W.

PRELIMINARY PROGRAM.

Next Annual Meeting, Jefferson City, May 14, 15, 16, 1907.

J. M. Allen, M. D.....Liberty
"Tuberculosis a Communicable Disease."

W. S. Allee, M. D.....Olean
"Duty of a Practitioner."

W. M. Bayliss, M. D.....Columbia
"The State Sanitarium."

G. A. Beedle, M. D.....Kansas City
"Carcinoma of the Breast."

T. L. Bradley, M. D.....Warrensburg
"Let Us Get Closer to the People."

O. H. Brown, M. D.....St. Louis
"Treatment of Pneumonia."

J. D. Brummall, M. D.....Salisbury
"Let Us Get Closer to the People."

J. Robert Buchanan, M. D.....Nevada
"Some Reflections Concerning the General Practitioner."

A. B. Burgwin, M. D.....Fayette
"The Duty of the Examining Surgeon for Life Insurance Companies."

R. D. Carman, M. D.....St. Louis
"The Value of the Roentgen Rays in the Diagnosis of Renal and Ureteral Calculi."

H. S. Crawford, M. D.....Harrisonville
"Attitude of the Public Toward the Doctor."

R. O. Cross, M. D.....Kansas City
"Consumption and Civilization."

H. E. Derwent, M. D.....Clinton
"The Eye and the Nervous System."

F. Devilbiss, M. D.....Spring Garden
"Local Medical Organization."

Walter B. Dorsett, M. D.....St. Louis
Title not announced.

T. H. Doyle, M. D.....St. Louis
"Have We Any Infallible Signs, Symptoms or Methods by Which We Can Diagnose Typhoid Fever Earlier Than the End of the First Week?"

H. E. Dunlop, M. D.....Canton
"Medical Education; Preliminary and Professional."

W. T. Elam, M. D.....St. Joseph
"The Myomectomy vs. Hysterectomy in the Surgical Treatment of Uterine Fibroids.

Wm. Frick, M. D.....Kansas City
"Some Forms of Scabies Seen in Private Practice."

C. E. Fulton, M. D.....Springfield
"The Surgical Treatment of Enlarged Prostate."

C. G. Geiger, M. D.....St. Joseph
"Inguinal Hernia."

O. G. Gleaves, M. D.....St. Joseph
"The Neglected Side of the Profession."

John Green, Jr., M. D.....St. Louis
"A Plea for the Cross-Eyed Child."

R. H. Goodier, M. D.....Hannibal
Title not announced.

C. B. Hardin, M. D.....Kansas City
"What We Have and What We Should Have of Medical Law Governing the Practice of Medicine."

R. D. Haire, M. D.....Clinton
"Local Anesthesia."

James Hanks, M. D.....Brashear
"Autointoxication."

Geo. Homan, M. D.....St. Louis
"Sanitation and Tuberculosis."

W. U. Kennedy, M. D.....St. Louis
"Cholecystectomy vs. Cholecystotomy."

C. C. Leeper, M. D.....Braymer
Title not announced.

P. I. Leonard, M. D.....St. Joseph
"The Tonsillar Ring as an Etiological Factor in Diseases of the Ear, Nose and Throat."

T. F. Lockwood, M. D.....Butler
"Medical Scraps."

W. J. McGill, M. D.....St. Joseph
"Stricture of the Rectum."

T. E. Potter, M. D.....St. Joseph
"Mastoid Abscesses and Their Sequellæ."

William Porter, M. D.....St. Louis
"Civic Responsibilities."

John Punton, M. D.....Kansas City
"A Plea for the State Care of Nervous Individuals."

C. F. Roberts, M. D.....Kansas City
"A Few Points Relative to Prostatectomy."

J. D. Seba, M. D.....Bland
"Tubercular Peritonitis."

J. N. Scott, M. D.....Kansas City
"Present States of X-Ray Treatment of Malignant Growths."

R. Winn, M. D.....Ilasco
Title not announced.

L. M. Warfield, M. D.....St. Louis
"Early Diagnosis of Tuberculosis."

DELEGATES.

COUNTY.	NAME	ADDRESS.
Adair	Jas. Hanks	Brashear.
Andrew	E. C. Bennett	Bolckow.
Barton	T. H. Duckett	Milford.
Bates	T. C. Boulware	Butler.
Caldwell	W. L. Lindley	Hamilton.
Chariton	Oliver McEwen	Shannondale.
Clinton	J. A. Franklin	Cameron.
Cooper	R. L. Evans	Boonville.
Grundy	W. D. Fulkerson	Trenton.
Henry	J. R. Hampton	Clinton Ford.
Howard	C. O. Lewis	Fayette.
Howell	J. W. Gingham	Pottersville.
Jackson	F. L. Cook	Kansas City.
	N. P. Wood	Independence.
	J. M. Frankenburger	Kansas City.
	Wm. J. Frick	Kansas City.
	F. E. Murphy	Kansas City.
Johnson	T. L. Bradley	Warrensburg.
Knox	H. Jurgens	Edina.
Lawrence-Stone	C. A. Moore	Aurora.
Lewis	H. E. Dunlap	Canton.
Linn	J. P. Oven	Brookfield.
Marion	Thos. Chowning	Hannibal.
Mississippi	A. W. Chapman	Charleston.
Moniteau	W. R. Patterson	Tipton.
Newton	R. C. Lanson	Neosho.
Nodaway	F. R. Anthony	Maryville.
Platte	S. Redman	Platte City.
Putnam	J. A. Townsend	Unionville.
Schuyler	J. D. Bridges	Downing.
St. Francois	F. L. Keith	Flat River.
St. Louis City	Paul Y. Tupper	St. Louis.
	J. C. Morfit	St. Louis.
	Jesse S. Myer	St. Louis.
	Wm. W. Graves	St. Louis.
	John Green, Jr	St. Louis.
	W. H. Stauffer	St. Louis.
	M. B. Clopton	St. Louis.
	F. L. Henderson	St. Louis.
	H. W. Soper	St. Louis.
Worth	W. E. McKinley	Denver.

The above represents the list of Delegates reported to date of going to press. We urge those Counties not represented in the above list to elect their delegates as soon as possible and forward the name and address of the delegate to the State Secretary.

COUNTY SOCIETY NOTES

BUTLER COUNTY MEDICAL SOCIETY.

The regular meeting of the Butler County Medical Society was held at Poplar Bluff on February 22.

Dr. Rowe read a paper entitled "The Physician a Debtor to the Organized Profession." On motion Dr. Rowe, as reporter of the Society, was instructed to send his paper to the Journal of the State Medical Association requesting that it be published in the State Journal. After some discussion of the paper by Drs. Norwine, Seybold, Smith and Crump, the Society adjourned.—ALFRED R. ROWE, M. D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

Cape Girardeau County Medical Society was called to order by vice president, Dr. Wichterich. There were eleven members and three visitors present.

The following program was rendered: "Pneumonia," by Dr. G. W. Tarlton. "Treatment of Pneumonia," by Dr. H. Hope. "Bronco-pneumonia in Childhood," by Dr. A. E. Dalton. Each paper was opened for general discussion.

Our society meets regularly on the first Friday of each month. Next place of meeting, Cape Girardeau, March 1st.—E. H. G. WILSON, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF JANUARY 25TH.

The society as the guests of the newly elected President Dr. J. R. Boyd, met at the Springfield Club on January 25th. Thirty members and five visitors were present. After a short social session the society adjourned to the Banquet Hall where after partaking of the many good things provided for the physical man, the following toasts were responded to: "The Therapeutics of the Future," by Dr. E. C. Fulton; "The Family Physician Past and Present," by Dr. F. E. Ross; "The Doctor as a Business Man," by Dr. H. S. Hill; "The Doctor as a Scientific Moralist," by Dr. W. M. Smith; "To See Ourselves as Others See Us," by Dr. J. E. Tefft; "The Light that Failed," by Dr. D. B. Farnsworth; "The Poetry of Medicine," by Dr. W. A. Camp; "The Good Greek Doctor," by Rev. J. W. Stewart; "The Upbuilding of Medicine," by Dr. N. P. Wood.—J. L. ORMSBEE, M. D., Secretary.

MEETING OF FEBRUARY 8TH.

The Society met in regular session. Dr. T. A. Coffelt, of the committee on proposed amendment of law, on criminal abortion, reported that they approved of said amendment and had written the Greene county representatives asking them to support same. President Boyd appointed the following committees for 1907: On Program and Scientific Work, Drs. W. P. Patterson, T. A. Coffelt, and W. M. Smith; on Public Health and Legislation, Drs. C. E. Fulton, W. A. Camp and S. W. Tickle.

Upon application with a proper transfer card Dr. B. F. Fortner was elected to membership in the society. The name of Dr. N. P. Wood, of Independence, Mo., was proposed for Honorary membership in the society and upon motion he was duly elected to membership.

Dr. W. A. Camp reported an interesting case of a man with pain behind his ear which gradually grew worse and almost unbearable; operation for abscess was advised but before operating he introduced a catheter through eustachian tube into the inner ear and produced suction thus removing a little thick, tenacious mucous which relieved the pain and patient recovered.

SYNOPSIS OF PRESIDENT'S ADDRESS.

This society does not hold the position here that it should or could. It is now over 30 years old, and while it has done its members much good the profession at large and community have not received the benefits that the society can and should give them. With the increased activity of our city in a commercial way this society should become more active.

The public is beginning to appreciate the medical profession more than in the past and we should grasp the opportunity and push ahead for greater things and be of more benefit to ourselves and the community at large.

With our excellent educational institutions, a graduate of which is credited in the St. Louis Medical Colleges with two years study, and with our four hospitals there is no reason why we cannot provide the other two years of study and thus have a complete medical college here.

I fully realize the responsibility of this Society and with your assistance and co-operation we can accomplish much in 1907.

MEETING OF FEBRUARY 15TH.

At this meeting, Dr. N. F. Terry read a paper on "The Relation of Pelvic Diseases to Insanity," which was discussed extensively. Those who took part in the discussion were: Drs. Fulton, Coffelt, Smith, Fortner and others.

The question of holding an open session of the society was dis-

cussed and a committee appointed to arrange a program. The date for the open meeting was left to the committee, but it will be held in the very near future, at a place to be decided later.

The general public will be extended a cordial invitation to be present. At the meeting last night five new members were taken into the society. The society is starting the new year under favorable conditions and much good is expected to be accomplished.—J. L. Ormsbee, M. D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY.

Howard County Medical Society met at Fayette on February 21st with seven members in attendance.

Dr. Lewis presented a patient, a child which had been having convulsions, and outlined his treatment which was successful.

Dr. Watts read a paper entitled "Suggestions to County and State Boards of Health."

Dr. Lewis made a motion, which prevailed, that the State Legislature be memorialized to appropriate a sufficient amount out of the $478,000 due the state from the Government, to establish and maintain at Columbia a laboratory for the production of antidiphtheritic and anitetanic serum and for distribution among the people at cost of production.

The committee on the case of Dr. Todd reported and the report was accepted. The secretary was instructed to forward the report and the petition to the Governor, through Judge Rich of the State Society.—C. W. Watts, M. D., Reporter.

JACKSON COUNTY MEDICAL SOCIETY.

MEETING OF JANUARY 8TH.

At this meeting 27 members were in attendance. Dr. H. C. Crowell was granted a letter of withdrawal on account of change of location.

Dr. E. G. Mark presented a case of argyria and also a case of congenital hydronephrosis. The discussion on these cases was opened by Dr. C. J. Morrow.

Dr. Calvin Atkins read a paper on the "Treatment of Cough," the discussion on this paper being opened by Dr. W. M. Reed.

MEETING OF JANUARY 15TH.

The scientific program consisted of the following papers: "Some Facts About Vaccination," by Dr. Eugene Carbaugh; discussion opened by Dr. R. E. Castlelaw.

"Psychology of Smallpox," by Dr. W. K. Trimble; discussion by Dr. Robert B. Brewster.

MEETING OF JANUARY 22ND.

Dr. Ernest Robinson read a paper entitled "Appendicitis During Pregnancy," the discussion on this being opened by Dr. C. A. Ritter. Dr. St. Elmo Sanders read a paper on "Spinal Analgesia." Dr. H. E. Pearse opening the discussion.

MEETING OF JANUARY 29TH.

This meeting was devoted to clinical cases and the exhibition of specimens. Dr. E. H. Skinner presented skiagraph pictures of fractures of the forearm; Dr. A. J. Florian presented a patient with mediastinal tumor, probably a sarcoma; Dr. Noah Adam presented a case showing the after effects of ophthalmia neonatorum. Dr. W. H. Coffey presented a case of congenital malformation of the rectum in a child who had for six years passed bowel contents through the vagina; operation had been performed by Dr. Coffey and the bowel brought into its normal situation, the false opening into the vagina being closed at the same time. The operation was entirely successful. The patient presented another anomaly in having a double vagina.

Dr. J. F. Binnie presented a specimen of gastric cancer giving a history of the case; Dr. J. P. Kanoky a case of psoriasis punctata; Dr. Maggie L. McRae a pessary through which had occurred a hernia of the vaginal wall and part of the bladder.

MEETING OF FEBRUARY 5TH.

A letter was read from Dr. J. W. Kyger, who is quite ill, thanking the members for attentions shown him. A communication from Dr. J. A. B. Adcock was also read and ordered filed. Drs. H. P. Wherritt and H. N. Carver, whose applications for membership had been reported favorably, were elected to membership. The applications of Drs. R. E. Lowe and Owen Krueger were referred to committee. A motion carried that the Society express their sincere regrets on account of the illness of Dr. G. W. Grove. In consideration of the long and useful life in the society of Dr. Geo. Halley, together with his recent decline in health, it was ordered upon motion, that the Society remit to the State Association his annual dues for 1907. Dr. Balsley, now in California on account of ill health, was granted a transfer card and declared in good standing up to April 1, 1907.

The essayists for the evening being absent, cases were reported by Dr. R. P. Sloan, Dr. Froehling and Dr. Chambers. The cases were discussed by Drs. R. M. Schauffler, Dr. Murphy and Dr. Langsdale.

MEETING OF FEBRUARY 12TH.

Dr. J. N. Scott reported a case of epithelioma of the face treated by the x-ray with most favorable results. Drs. Fryer and Lisle discussed the condition. Dr. A. J. Florian presented a case of myxedema. About a year ago the patient had submitted to operation at

which time the thyroid gland had been completely extirpated. Drs. Hays, Jackson and Hannawalt took part in the discussion that followed.

Dr. W. F. Kuhn read a paper entitled "Scientific Medicine vs Boarding Houses in the Treatment of the Insane." He advanced the theory that insanity is largely if not almost always the result of metabolic toxemia and this seemed strongly apparent when the results of blood findings were compared to those obtained in cases of undoubted toxemia. Dr. Murphy and Dr. Frank Hall, Dr. Fryer and Dr. Child discussed the paper.

MEETING OF FEBRUARY 19TH.

The application of Dr. F. W. Froehling was referred to the membership committee. Drs. Robert E. Lowe and Anton G. Frye were elected members of the Society. An invitation from the Kansas City Surgical Society asking the members to attend the banquet and smoker to be given in honor of Drs. F. Gregory Connell and Van Buren Knott, was read.

The scientific program consisted entirely of papers from oculists. The following were read:

"Post-Operative Complications of Cataract," by Dr. J. H. Thompson. "Epi-Sclero-Keratitis," by Dr. Schutz. "Stricture of the Nasal Duct," by Dr. D. L. Shumate.

MEETING OF FEBRUARY 26TH.

The application of Dr. Walter J. Lowery was referred to the membership committee. A letter of withdrawal was granted Dr. L. L. Cooke, now of Muskogee, Ind. Ter.

The scientific work of the evening consisted entirely of cases reported by various members, no formal papers being presented. E. L. STEWART, M. D., Secretary.

LACLEDE COUNTY MEDICAL SOCIETY.

The Laclede County Society met at Lebanon, on January 14th. Eight members being present.

On motion a communication from Kentucky referring to Life Insurance examinations was read and the resolution adopted. On motion the secretary was instructed to notify our representative in the Legislature, Hon. Wm. H. Butts, that this society unanimously endorsed the bills on Abortion and Pure Food which were recommended by the State Board of Health.

Dr. J. A. Pinckard read a paper "Pain in the Ovaries." The following officers were elected for the year 1907. President, J. A. McComb; secretary, J. A. Pinckard; treasurer, T. B. Herbert; delegate to State Society, J. M. Billings; member of legislative committee, J. A. McComb.

The following resolutions were unanimously adopted:

"Whereas: We have the information that there are a number of men who are illegally practising medicine in Laclede County, writing prescriptions, etc., where they are doing so in direct violation of the statutes of our state, and bringing into disrepute the legally authorized practitioners of medicine and surgery and disgrace upon the profession, therefore be it

Resolved: 1st. That we agree to do all we can to bring to justice such lawbreakers, and hereby pledge ourselves as most earnestly opposing such practise, and

Second: That we urge our Prosecuting Attorney, Mr. I. W. Mayfield, to prosecute such violators at the earliest opportunity and we recommend that he insist on as near the maximum fine in such convictions as can be secured.

Third: We believe the general public is in full sympathy with us in the protection of the lives of our citizens." J. A. Pinckard, M. D., Secretary.

ST. GENEVIEVE COUNTY MEDICAL SOCIETY.

The regular monthly meeting was held in St. Mary on, February 13th.

Dr. Rutledge gave a clinical report of an obscure case which was generally discussed.

Dr. J. A. Wilkins presented a paper on "Indications for Diuretics," with the anatomy and physiology of the Kidneys, which was very interesting.

Letter was read from Creasy L. Wilbur, M. D., Chief Statistician Department Commerce and Labor, Bureau of the Census, Washington, D. C.

Letter from Louis M. Wakefield, chief physicion of St. Louis Society for Relief of Consumption, requesting county societies to aid in the fight against consumption was also read.

For next meeting, Dr. Rutledge was appointed to prepare a paper on "Digestion and Assimilation" and Dr. Hertich, one under the head of "Clinical Report of Cases."

No further business appearing, the society adjourned to meet in St. Genevieve, second Wednesday in March, at 8 a. m.—R. W. Lanning, M. D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY.

The St. Louis County Medical Society held a meeting February 13th, at Kirkwood, with seventeen members present.

The Society endorsed a bill pending in the Legislature relative to a System of Collecting Vital and Mortuary Statistics, and a System of Reporting and Controlling Contagious Diseases.

This bill is recommended by the State Board of Health and indorsed by the Committee on Public Health and Legislation of the State Medical Association.

Dr. W. H. Townsend read an interesting paper on "Some Observations of Gallstone Disease and Treatment."

Dr. N. N. Jensen read a good paper, "The Cholagogues," covering his subject in a scientific manner. The papers were ably discussed.

Dr. Howard Carter presented some specimens of gallstones and demonstrated the chemical reaction for the presence of bile in urine.

Drs. H. T. Lucas, of Bridgeton, and Horine Miles of Old Orchard, were elected to membership.

Dr. A. V. Campbell requested transfer card to St. Louis Medical Society which was granted.

The program for March promises papers entitled, "The Present View of Rheumatoid Affections" and "The Digitalis Group" by P. M. Brossards and N. E. Metcalfe respectively.—R. D. Moore, M. D., Reporter.

ST. LOUIS MEDICAL SOCIETY OF MISSOURI.

The Executive Committee of the St. Louis Medical Society have submitted prepared programs for meetings as follows:

FEBRUARY 23RD.

Clinical and Pathological Meeting.

Presentation of Cases and Specimens Illustrating Lesions of the Heart and Aorta.

MARCH 2D.

Dermatological Meeting on Syphillis.

MARCH 9TH.

Symposium on the Prostate.

MARCH 16TH.

Medical Inspection of Public Schools.

MARCH 23RD.

Early Manifestations and Diagnosis of Incipient Pulmonary Tuberculosis of the Lungs.

MARCH 30TH.

Pediatric Meeting.

APRIL 6TH.

Renal Calculi and Hematuria.

On behalf of the Society we extend to members of the various county societies who happen to be in St. Louis on Saturady night a cordial invitation to attend the meetings of the St. Louis Medical Society.

OPHTHALMIC SECTION.

The recently organized Ophthalmic Section of the St. Louis Medical Society held its inaugural meeting February 13, 1907, in the Board room of the Medical Library Building, 3525 Pine street.

The interest manifested by the ophthalmologists of the society in this Section is attested by the fact that 20 out of a total present membership of 25 were present.

The Chairman, Dr. Barck made a few introductory remarks pointing out the need of an organization like the Ophthalmic Section to supply the scientific requirements of specialist members in a general medical body. He felt that nothing but good could accrue from this move and asked the hearty co-operation of the members in the scientific work of the section.

Dr. W. A. Shoemaker showed a patient with a gun-shot wound of the globe, and exhibited x-ray photographs, showing a bullet in the globe.

Dr. J. M. Ball showed a patient with diabetic retinitis. Dr. Wiener discussed the x-ray localization of foreign body within the globe, by Sweet's method.

In the discussion, Dr. Wells, Roentgenologist to the Skin and Cancer Hospital, demonstrated Sweet's method together with a valuable modification of his own. At the conclusion of the discussion Dr. Wells was invited by the Section to prepare a formal paper on Sweet's method as modified by him for presentation at the next meeting.

Dr. N. M. Semple described an operation for the relief of symblepharon, with the aid of paraffine plates.

Dr. Green demonstrated the astigmatic charts of Dr. F. H. Verhoeff.

Dr. Ball read a paper entitled "A Sketch of the Life of George Frick" (Author of the first American text book on ophthalmology.)

The following number were present:

Drs. Barck, Charles, Jenning, C. Loeb, Muetze, Buckwalter, Gross, Henderson, Higbee, Semple, William, Luedde, Owen, Reinders, C. W. Parker, Wiener, W. A. Shoemaker, J. M. Ball, John Green, Jr.

Visitors: Drs. Hoge, Wells, Wm. W. Graves.

NEW AND NON-OFFICIAL REMEDIES.

The following articles have been tentatively approved by the Council on Pharmacy and Chemistry of the American Medical Association. The list will be revised by adding other articles as accepted and by omitting any which on further investigation may be found to conflict with the rules of the Council.

Following the name of each article is the name of the manufacturer or, in case of foreign products, of the American agent; where no name is given the article is believed to be neither protected by patent nor trademark. The date following the article refers to the preliminary publication in *The Journal A. M. A.* When no date is given the description has not yet been published. This list, brought up to date, will appear in the first issue of each month.

Acetone (P. D. & Co.) Sept. 15, 1906.
Acetone Inhalant (P. D. & Co.) Sept. 15, 1906
Acet-theocinsodium (Cont. Color and Chem. Co.), Sept. 15, 1906.
Adnephrin Emollient (Stearns & Co.), Sept. 15, 1906.
Adnephrin Oil Spray (Stearns & Co.), Sept. 15, 1906.
Adnephrin Solution (Stearns & Co.), Sept. 15, 1906.
Adnephrin Suppositories (Stearns & Co.).
Adrenalin (P. D. & Co.), Sept. 15, 1906.
Adrenalin Chloride Solution (P. D. & Co.), Sept. 15, 1906.
Adrenalin Suppositories (P. D. & Co.), Sept. 15, 1906.
Agurin (Cont. Color and Chem. Co.), Sept. 15, 1906.
Airol (Hoffman-LaRoche Chem. Works), Sept. 15, 1906.
Albargin (Koechl & Co.).
Alpha-Eucaine Hydrochloride (Schering & G.), Sept. 15, 1906.
Alphozone (Stearns & Co.), Sept. 15, 1906.
Alphozone Tablets (Stearns & Co.), Sept. 15, 1906.
Alumnol (Koechl & Co.), Sept. 15, 1906.
Alypin (Cont. Color & Chem. Co.).
Aminoform (Bischoff & Co.), Sept. 15, 1906.
Anesthesin (Koechl & Co.), Sept. 15, 1906.
Anthrasol (Knoll & Co.).
Antipyrine Salicylate, Sept. 15, 1906.
Antithermoline (G. W. Carnrick Co.), Sept. 15, 1906.
Antothyroidin (Merck & Co.), Sept. 15, 1906.
Antithyroid Preparations, Sept. 15, 1906.
Argentamin (Schering & G.), Sept 15, 1906.
Argonin (Koechl & Co.), Sept. 15, 1906.
Argyrol (Barnes & Hille), Sept. 15, 1906.
Aristochin (Cont. Color & Chem. Co.), Sept. 22, 1906.
Aristol (Cont. Color & Chem. Co.), Sept. 22, 1906.
Aspirin (Cont. Color & Chem. Co.), Sept. 22, 1906.
Benzosol (Koechl & Co.), Sept. 22, 1906.
Beta-Eucaine Hydrochloride (Schering & G.), Sept. 22, 1906.
Beta-Naphthol Benzoate (Merck & Co.), Sept. 22, 1906.
Betol (Heyden Chem. Works), Sept. 22, 1906.
Bismal (Merck & Co.), Sept. 22, 1906.
Borochloretone (P. D. & Co.), Sept. 22, 1906.
Brometone (P. D. & Co.), Sept. 22, 1906.
Bromipin—10 per cent. (Merck & Co.), Sept. 29, 1906.
Bromipin—33 1-3 per cent. (Merck & Co.), Sept. 29, 1906.
Butyl-Chloralhydrate, Sept. 29, 1906.
Calcium Ichthyol (Merck & Co.), Sept. 29, 1906.
Calomelol (Heyden Chem. Works), Sept. 29, 1906.
Calomelol Ointment (Heyden Chem. Works), Sept. 29, 1906.
Cascara Evacuant (P. D. & Co.), Sept. 29, 1906.
Cascara Tonic Laxative Globules (P. D. & Co.), Sept. 29, 1906.
Chinaphenin (Cont. Color & Chem. Co.), Sept. 29, 1906.
Chloralamid (Schering & G.).
Chlorbutanol, Sept. 29, 1906.
Chloretone (P. D. & Co.), Sept. 29, 1906.
Chloretone Inhalant (P. D. & Co.), Sept. 29, 1906.
Citarin (Cont. Color & Chem. Co.), Sept. 29, 1906.
Collargol (Schering & G.).
Collargol Ointment (Schering & G.).
Cresotal (Cont. Color & Chem. Co.), Oct. 6, 1906.
Cresylone (P. D. & Co.).
Cupro-Hemol (Merck & Co.).
Dentalone (P. D. & Co.), Oct. 6, 1906.
Dermatol (Koechl & Co.), Oct. 6, 1906.
Diabetin (Schering & G.), Oct. 6, 1906.
Dionin (Merck & Co.), Oct. 6, 1906.
Diuretin (Merck & Co.), Oct. 6, 1906.
Duotal (Cont. Color & Chem. Co.), Oct. 6, 1906.
Duotonal (Schering & G.), Oct. 6, 1906.
Elixir Eupnein (Schieffelin & Co.), Oct. 6, 1906.
Elixir Saw Palmetto (P. D. & Co.), Oct. 6, 1906.
Empyroform (Schering & G.), Oct. 6 1906.
Epicarin (Cont. Color & Chem. Co.), Oct. 6, 1906.
Erythrol Tetranitrate (Merck & Co.), Oct. 6, 1906.
Ethylenediamine (Schering & G.), Oct. 6, 1906.
Eucaine, Oct. 6, 1906.
Eucaloids (Edward G. Binz), Oct. 6, 1906.
Eucamul (Edward G. Binz), Oct. 13, 1906.
Euformol (P. D. & Co.).
Eugallol (Knoll & Co.), Oct. 13, 1906.
Eumydrin (Cont. Color & Chem Co.), Oct. 13, 1906.
Euphorin (Fbrk. v. Heyden), Oct. 13, 1906.
Euphthalmin (Schering & G.), Oct. 13, 1906.
Euquinine (Merck & Co.), Oct. 13, 1906.
Euresol (Knoll & Co.), Oct. 13, 1906.
Euresol Soap (Knoll & Co.), Oct. 13, 1906.
Europhen (Cont. Color & Chem. Co.), Oct. 13, 1906.
Exodin (Schering & G.).
Ferrichthyol (Merck & Co.), Oct. 13, 1906.
Ferripyrine (Koechl & Co.), Oct. 13, 1906.
Ferronyrine (Knoll & Co.), Oct. 13, 1906.
Formalin (Schering & G.), Oct. 13, 1906.
Formin (Merck & Co.), Oct. 13, 1906.
Gallogen (Bischoff & Co.), Oct. 13, 1906.
Germicidal Soap (P. D. & Co.), Oct. 13, 1906.
Glutol-Schleich (Schering & G.), Oct. 13, 1906.
Glycerin Emollient (P. D. & Co.), Oct. 13, 1906.
Glycerophosphates, Oct, 13, 1906.
Guaiacol-Salol (Merck & Co.), Oct. 13, 1906.
Guaiamar (Mallinckrodt Chem. Works), Oct. 20, 1906.
Guajasanol (Koechl & Co.), Oct. 20, 1906.
Haemoferrum (Stearns & Co.).
Hedonal (Cont. Color & Chem. Co.), Oct. 20, 1906.
Helmitol (Cont. Color & Chem. Co.), Oct. 20, 1906.

Hemicranin (Cont. Color & Chem. Co.), Oct. 20, 1906.
Hemogallol (Merck & Co.), Oct. 20, 1906.
Hemol (Merck & Co.).
Hemoquinine (Schieffelin & Co.), Oct, 29, 1906.
Heroin (Cont. Color & Chem. Co.), Oct. 20, 1906.
Heroin Hydrochloride (Cont. Color & Chem. Co.), Oct. 20, 1906.
Heromal (Schieffelin & Co.), Oct. 20, 1906.
Heroterpine (Schieffelin & Co.), Oct. 20, 1906.
Hetol (Merck & Co.), Oct. 20, 1906.
Hexamethylenamine Methylencitrate, Oct. 27, 1906.
Holocaine Hydrochloride (Koechl & Co.), Oct. 27, 1906.
Hypnal (Koechl & Co.), Oct. 27, 1906.
Ichthalbin (Knoll & Co.), Oct. 27, 1906, Nov. 10, 1905.
Ichthammon (F. Reichelt), Oct. 27, 1906.
Ichthargan (Ichthyol Co.), Oct. 27, 1906.
Ichthermol (Merck & Co.), Oct. 27, 1906.
Ichthoform (Merck & Co.), Oct. 27, 1906.
Ichthyol (Merck & Co.), Oct. 27, 1906.
Ichthyolum Austriacum (G. Heil & Co.), Oct. 27, 1906.
Iodipia 10 per cent. (Merck & Co.), Oct. 27, 1906.
Iodipin—25 per cent. (Merck & Co.), Nov. 3, 1906.
Iodoformogen (Knoll & Co.), Nov. 3, 1906.
Iodothyrine (Cont. Color & Chem. Co.), Nov. 3, 1906.
Iothion (Cont. Color & Chem. Co.), Nov. 3, 1906.
Isoform Powder (Koechl & Co.), Nov, 3, 1906.
Isopral (Cont. Color & Chem. Co.), Nov. 3, 1906.
Kasagra (Stearns & Co.), Nov. 3, 1906.
Kole, Stearns (Stearns & Co.), Nov. 3, 1906.
Kresamine (Schering & G.), Nov. 3, 1906.
Lac Bismo. (E. J. Hart & Co.), Nov. 3, 1906.
Lactophenin (Chem. Fbrk. vrm., Goldenberg, Geremont & Co.), Nov. 3, 1906.
Laminoids Ferruginous (Nascent) (Schieffelin & Co.), Nov. 3, 1906.
Lennigallol (Knoll & Co.), Nov. 3, 1906.
Liquer Tritici (P. D. & Co.), Nov. 3, 1906.
Lithium Ichthyol (Merck & Co.), Nov. 3, 1906.
Lycetol (Cont. Color & Chem. Co.), Nov. 3, 1906.
Lysidin (Koechl & Co.), Nov. 3, 1906.
Mercurol (P. D. & Co.), Nov. 3, 1906.
Mesotan (Cont. Color & Chem. Co.), Nov. 3, 1906.
Methaform (Stearns & Co.), Nov. 3, 1906.
Migrainin (Koechl & Co.), Nov. 3, 1906.
Neurocaine (Schieffelin & Co.), Nov. 3, 1906.
Neuronidia (Schieffelin & Co.), Nov. 3, 1906.
Novargan (Heyden Chem. Works).
Novocaine (Koechl & Co.), Nov. 10, 1906.
Nutrose (Koechl & Co.), Nov. 3, 1906.
Oil of Eucalyptus, globules (E. G. Binz).
Organic Iron Preparations.
Orthoform-New (Koechl & Co.), Nov. 10, 1906.
Orthoform-New Hydrochloride (Koechl & & Co.), Nov. 10, 1906.
Ovoferrin (Barnes & Hille), Nov. 10, 1906.
Oxaphor (Koechl & Co.), Nov. 10, 1906.
Pegnin (Koechl & Co.), Nov. 17, 1906.
Phenacerin (Cont. Color & Chem. Co., Nov. 10, 1906.
Phenocoll Hydrochloride (Schering & G.), Nov. 10, 1906.
Phenocoll Salicylate, Nov. 10, 1906.
Piperazine (Cont Color & Chem. Co., Schering & G.), Nov. 17, 1906.
Pollantin (Fritzsche Bros.), Nov. 17, 1906.
Pollantin Powder (Fritzsche Bros.), Nov. 17, 1906.
Protargol (Cont. Color & Chem. Co.).
Purgatin (Knoll & Co.), Nov. 17, 1906.
Pyramidon (Koechl & Co.), Nov. 17, 1906.
Pyramidon Neutral Camphorate (Koechl & Co.), Nov. 17, 1906.
Pyramidon Acid Camphorate (Koechl & Co.), Nov. 17, 1906.
Pyramidon Salicylate (Koechl & Co.), Nov. 17, 1906.
Quartonol (Schering & G.), Nov. 24, 1906.
Red Bone Marrow (Armour & Co.).
Sajodin (Cont. Color & Chem Co.).
Sal Ethyl (P. D. & Co.), Nov. 24, 1906.
Saliformin (Merck & Co.), Nov. 24, 1906.
Salit (Heyden Chem. Works), Nov. 24, 1906.
Salophen (Cont. Color & Chem. Co.), Nov. 24, 1906.
Saloquinine (Merck & Co.), Nov. 24, 1906.
Saloquinine Salicylate (Merck & Co.), Nov. 24, 1906.
Santyl (Knoll & Co.).
Sextonal (Schering & G.), Nov. 24, 1906.
Sidonal (Koechl & Co.), Nov. 24, 1906.
Sodium Cacodylate, Nov. 24, 1906.
Sodium Cinnamate Nov. 24, 1906.
Sodium Ichthyol (Merck & Co.), Dec. 1, 1906.
Stovaine (Walter F. Skyes), Dec. 1, 1906.
Stypticin (Merck & Co.), Dec. 1, 1906.
Styptol (Knoll & Co.), Dec. 1, 1906.
Styracol (Knoll & Co.), Dec. 1, 1906.
Sublamine (Schering & G.), Dec. 8, 1906.
Sulphonal (Cont. Color & Chem. Co.), Dec. 8, 1906.
Suprarenal Alkaloid, Dec. 8, 1906.
Suprarenal Liquid (P. D. & Co.).
Suprarenalin (Armour & Co.).
Suprarenalin Ointment (Armour & Co.).
Suprarenalin Solution (Armour & Co.).
Suprarenalin Triturates (Armour & Co.).
Tannalbin (Knoll & Co.), Dec. 15, 1906.
Tannigen (Cont. Color & Chem. Co.), Dec. 8, 1906.
Tannoform (Merck & Co.), Dec. 15, 1906.
Tannopin (Cont. Color & Chem. Co.), Dec. 15, 1906.
Theobromine, Dec. 15, 1906.
Theobromine Sodium Salicylate, Dec. 15, 1906.
Theocin (Cont. Color & Chem. Co.), Dec. 22, 1906.
Theophylin, Dec. 22, 1906.
Thermodin (Merck & Co.), Dec. 22, 1906.
Thiocol (Hoffmann-LaRoche Chem. Works), Dec. 22, 1906.
Thiosinamine (Schering & G.).
Thyreoidectin (P. D. & Co.).
Tonic Hypophosphites (Sharp & Dohme).
Tonols (Schering & G.), Dec. 22, 1906.
Triferrin (Knoll & Co.).
Triferrol (Knoll & Co.).
Trikresol (Schering & G.).
Trional (Cont. Color & Chem. Co.).
Trioxymethylene (Merck & Co.).
Triphenin (Merck & Co.).
Tritipalm (Stearns & Co.).
Tropacocain Hydrochloride (Merck & Co.).
Trypsogen (G. W. Carnrick Co.).
Tumenol-Ammonium (Koechl & Co.).
Tumenol (Koechl & Co.).
Tumenol Sulphone (Koechl & Co.).
Tumenol Sulphonic Acid (Koechl & Co.).
Tussol (Koechl & Co.).
Urethan (Merck & Co.).
Uriform (Schieffelin & Co.).
Uritone (P. D. & Co.).
Uropherin (Merck & Co.).
Urotropine (Schering & G.).
Urotropine-New (Schering & G.).
Validol (Bischoff & Co.).
Validol Camphoratum (Bischoff & Co.).
Valyl (Koechl & Co.).
Veronal (Merck & Co.).
Vibutero (Stearns & Co.).
Vinum Extracti Morrhuae, Stearns (Stearns & Co.).
Vioform (Bischoff & Co.).
Vioform-Gauze (Bischoff & Co.).
Xeroform (Heyden Chem. Works), Sept. 29, 1906, Oct. 13, 1906.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

We reprint herewith from *The Journal* of the American Medical Association, for September 15, the first installment of the report of the Council on Pharmacy and Chemistry. Additional installments will appear from time to time. The importance of these reports is too evident to need comment. For the first time in the history of the organized profession, a scientific commission, whose ability and probity is above suspicion, has reported on preparations regarding which heretofore we have had only the report of those interested, financially and otherwise, in their exploitation.

ACETOZONE.

A mixture of equal parts of benzoylacetyl peroxide and an inert absorbent powder.

Actions and Use.—Benzoylacetyl peroxide belongs to a class of compounds known as the organic peroxides in which an excess of oxygen has been combined in such a way that it is somewhat slowly given off in a nascent condition. On contact with water it hyprolyzes, forming benzo-peracid and aceto-peracid which exert marked oxidizing and germicidal action. In consequence of this change, these compounds are thought to be particularly adapted for internal administration. The germicidal and antiseptic properties of this substance have been attested by the experimental results of several observers. It has been used in ophthalmic, aural and nasal practice with asserted good effects as an antiseptic. It has also been applied internally, especially in typhoid fever, with a view to the disinfection of the intestinal canal, and appears to be an intestinal antiseptic. Dosage.—Acetozone is generally employed in acqueous solution prepared as follows: Add acetozone to warm water in the proportion of 1 Gm. to 1000 Cc. (15 grains to the quart). shake vigorously for five minutes, and allow to stand for about two hours. Decant the liquor as required. This solution may be drunk *ad libitum*, two quarts or more being taken by an adult in twenty-four hours. Acetozone is also used in oily solution as an inhalant. Manufactured by Parke, Davis & Co., Detroit, Mich.

ACETOZONE INHALANT.

A solution of benzoylacetyl peroxide in liquid petrolatum. Formula: One hundred grammes contain: Benzoylacetyl peroxide, 1.0 Gm.; chloretone (chlorbutanol), 0.5 Gm.; Refined liquid petrolatum, 98.5 Gm.

Dosage.—It is to be inhaled in the form of a very fine spray, or nebula, best produced by an atomizer especially designed for oily liquids. Prepared by Parke, Davis & Co., Detroit, Mich.

ACET-THEOCINSODIUM.

Acet-theocinsodium, $C_7H_7N_4O_2Na+CH_3COONa$, a double salt of sodium acetate and 1.3 dimethylxanthine-sodium (theophyllinsodium).

Actions and Uses.—It has the diuretic properties of theocin, reinforced by the diuretic action of sodium acetate, and being more soluble, it has been claimed to be more readily absorbed and better tolerated than theophylline. It is recommended in cardiac affections, nephritis, dropsy, etc. Dosage.—0.2 to 0.35 Gm. (3 to 5 grains), best given after meals. Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color and Chemical Co., New York).

ADNEPHRIN EMOLLIENT.

Recommended as a local application where prolonged use is required.

Prepared by F. Stearns & Co., Detroit, Mich.

ADNEPHRIN OIL SPRAY.

The preparation is applied as a spray to the mucous membranes in congestive and inflammatory affections, preferably after washing with Dobell's solution. Prepared by F. Stearns & Co., Detroit, Mich.

ADNEPHRIN SOLUTION.

A sterile solution 1-1000 of the suprarenal active principle in physiologic salt solution containing one-half of one per cent. of methaform (chlorbutanol).

Actions and Uses.—The actions and uses of this preparation are described under Suprarenal Alkaloid. Dosage.—The dose internally is from 0.2 to 2.0 Cc. (3 to 30 minims) in water. Adnephrin is also used in oily solution as a spray, see Adnephrin Oil Spray, and in the form of ointment, see Adnephrin Emollient. Prepared by F. Stearns & Co., Detroit, Mich.

ADRENALIN.

The active alkaloid of suprarenal gland, prepared by the method of takamine, see Suprarenal Alkaloid.

Dosage.—Locally, 1-1000 to 1-15000 solution, as the chloride. Internally, 0.3 to 2 Cc. (5 to 30 mm.) of 1-1000 solution. Hypodermically, 1 to 15 drops of 1-1000 solution, diluted with sterile water. Manufactured by Parke, Davis & Co., Detroit, Mich.

ADRENALIN CHLORIDE SOLUTION.

Dosage.—See adrenalin. Prepared by Parke, Davis & Co., Detroit, Mich.

ADRENALIN SUPPOSITORIES.

1 part of adrenalin to 1000 parts of oil of thebroma (cocao butter). Each suppository weighs about 1 Gm. (15 grains). Prepared by Parke, Davis & Co., Detroit, Mich.

AGURIN.

Agurin, $C_7H_7N_4O_2Na+NaC_2H_3O_2$, a double salt sodium acetate and theobromine-sodium.

Actions and Uses.—It acts like theobromine, over which it has the advantage of great solubility and that it is well tolerated by the stomach. While inferior in diuretic power to theophyllin (which see), it is said to have greater power in sustaining the diuresis produced. Dosage.—0.5 to 1 Gm. (7 to 15 grains), preferably in wafers or capsules. If in solution, this should be freshly prepared (with peppermint water) and without sugar or mucilage. Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld. Germany (Continental Color & Chemical Co., New York).

AIROL.

Airol, $C_6H_7(OH)_3(COOBiI(OH))=C_7H_5O_6IBi$, a combination of bismuth oxyiodide (subiodile) and galic acid.

Actions and Uses.—As it liberates iodine in the nascent state in the presence of wound secretions it has been recommended as a desirable and efficient substitute for iodoform in the treatment of wounds, burns, skin diseases, gonorrhea, etc. Dosage.—It is used externally in the pure state or diluted with talc, or in the form of a 10 per cent. Suspension in equal parts of glycerin and water, or as a 10 to 20 per cent, ointment with 2 parts of petrolatum and 7 parts of wool fat. Manufactured by F. Hoffmann-LaRoche & Cie., Basle, Switzerland (The Hoffman-LaRoche Chemical Works. New York).

ALPHA-EUCAINE HYDROCHLORIDE.

Alpha-eucaine hydrochloride is the hydrochloride of benzoyl-methyl-oxypiperidine-carbonic methyl ester.

Actions and Uses.—The action of alpha-eucaine is similar to that of cocaine, but it is regarded as three and three-fourths times less toxic than cocaine. In large doses it first stimulates and then paralyzes the central nervous system: it slows the heart and produces a fall of blood pressure. Locally it acts like cocaine as an anesthetic, but dilates the blood vessels instead of contracting them. It does not dilate the pupil. It is more irritating to the mucous membrane than cocaine or than beta-eucaine. It has a moderate bactericidal action. It is used as a substitute for cocaine in general and minor surgery, but beta-eucaine is preferred for applications to the eye. Dosage.—2 to 5 or even 9 per cent. solutions. Not more than 2Cc. (30 minims) of a 4 per cent. solution should be used at one time. Manufactured by Chemische Fabrik auf Actien. vorm. E. Schering, Berlin (Schering & Glatz, New York).

ALPHOZONE.

Alphozone, $(COOH.CH_2CH\ CO)_2O_2 = C_8H_{10}O_8$, an organic paeroxide resulting from the action of hydrogen dioxide on succinic anhydride.

Actions and Uses.—Alphozone belongs to the class of organic peroxides, and by its powerful oxidizing power becomes a germicide and antiseptic. Dosage.—Alphozone is also marketed in the form of tablets containing, each 0.065 Gm. (one grain). of alphonzone, which are used for making solutions, one tablet to 60 Cc. (2 fluid ounces) of water giving a solution (1 to 1000) suitable for general external use; but. as a nasal douche, one tablet in 180 Cc. (6 fluid ounces) of water is often preferred. Manufactured by F. .Stearns & Co., Detroit, Mich.

ALUMNOL.

The aluminum salt of B-naphtholdisulphonic acid, $(Al_2(C_{10}H_5OH(SO_2)_2)_3 = Al_2C_{30}H_{18}O_{21}S_6$.

Actions and Uses.—It is an astringent and mild antiseptic. It is claimed that it can be used as a mild astringent, an irritant or a caustic, according to the strength of the solution, and it is asserted that it exerts a peculiarly destructive action on gonococci. It has been recommended for a variety of affections in which a caustic, astringent or antiseptic is indicated. It has been particularly recommended for gonorrhea in females, especially when affecting the endometrium. Dosage.—As a surgical antiseptic, in 0.5 to 3 per cent. solutions; in gynecology, in 2 to 5 per cent. Solutions; in otology and laryngology, either as powder or in ¼ to 1 per cent. solution as douches, washes or gargles; as cautery, in 10 to 20 per cent. solution. Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a.M. (Victor. Koechl & Co., New York).

AMINOFORM.

A name applied to Hexamethylenamina, U. S. P. Sold by C. Bischoff & Co., New York.

ANESTHESIN.

Anesthesin $C_6H_4(NH_2)\ (COOC_2H_5)\ 1:4 = C_9H_{11}O_2N$ the ethyl ester of paramidobenzoic acid, obtained by the reduction of paranitrobenzoic acid.

Actions and Uses.—It was introduced as a substitute for cocaine and is a local anesthetic, similar in its action to orthoform and said to be equally effective, but free from irritant action and toxicity. The anesthetic action, like that of the related compound orthoform, resembles that of cocaine, but is purely local, does not penetrate the mucous membranes, and in consequence of its insolubility the compound can not be used by hypodermic injection. In consequence of its insolubility the anesthetic effect is more prolonged than that of cocaine. It is recommended in various forms of gastralgia, in ulcer and cancer of the stomach for the relief of pain, and is

applied locally in rhinologic and laryngeal affections, urethritic, etc.; it is also recommended for anesthetizing wounded surfaces, burns, ulcerations and painful affections of the skin. It is more effective in cases where the skin is broken. Dosage.—Internally, 0.3 to 0.5 Gm. (5 to 8 grains). in pastilles. Externally it is applied as a dusting powder, either pure or diluted. It may be applied as an ointment or in the form of suppositories. Manufactured by Farbwerke, vorm. Meister, Lucius & Breuening, Hoechst a. m. (Victor Koechl & Co., New York).

ANTIPYRINE SALICYLATE.

Antipyrine salicylate, $C_{11}H_{12}N_2O.C_6H_4OH.COOH=C_{18}H_{18}N_2O_4$, a weak chemical combination of antipyrine and salicylic acid.

Actions and Uses.—This compound possesses the properties of both antipyrine and salicylic acid and combines the analgesic power of the one with the anti-rheumatic action of the other. It has been used with good results in sciatica, rheumatic fevers, chronic rheumatism, influenza, pleurisy, dysmenorrhea, etc. Dosage.—0.3 to 2.0 Gm. (5 to 30 grains) in cachets or capsules.

ANTITHERMOLINE.

A name applied to a preparation said to be made according to the following formula: Each pound contains 4000 grains of imported washed kaolin, washed and purified, 14 grains boric acid, 14 grains oil of eucalyptus, menthol and thymol combined, and 4.9 fluid ounces of glycerin. It closely resembles the Cataplasma Kaolini, U. S. P. Prepared by G. W. Carnrick Co., New York.

ANTITHYROID PREPARATIONS.

Preparations obtained from the blood or milk of animals, after the removal of the thyroid glands. The use of these preparations is based on the theory that the thyroid gland secretes products which are toxic, but which neutralize, and are neutralized by, other toxic substances produced elsewhere in the body. Removal of the thyroid glands, therefore, leads to the accumulation of these second toxic substances as evidenced by the phenomena of cachexia strumipriva and myxedema. On the other hand, the blood or milk of such animals is capable of preventing the effects of a hypersecretion of thyroid substance, such as is supposed to occur in Basedow's disease (exophalmic goiter.) These views are still largely hypothetical; but the majority of clinical observers report markedly beneficial results in the milder forms of the disease and in obscure nervous disorders which are supposedly connected with thyroid hypersecretion. The effects are less pronounced in the more severe forms. The action is merely palliative and other measures of treatment should not be neglected. Improvement occurs in two or three weeks and is indicated by an amelioration of the nervous symptoms, tremors, palpitation, insomnia and excitability. The administration must be long continued. Oral and hypodermic administration are equally effective, but the former is usually preferred. These preparations are not toxic, even when very large doses are used.

ANTIHYDROIDIN, Mœbius.

The blood-serum of sheep from which the thyroid gland has been removed at least six weeks before the blood is drawn, preserved by the addition of 0.5 per cent. of phenol.

Actions and Uses.—For action and uses see antithyroid preparations. Dosage.—It is administered by the mouth in doses beginning with 0.5 to 1Cc. (8 to 15 min.) three times a day, gradually increasing the dose as necessary. Manufactured by E. Merck, Darmstadt. (Merck & Co., New York).

ARGENTAMIN.

An aqueous solution of silver nitrate and ethylenediamine, corresponding to 10 per cent. of silver nitrate.

Actions and Uses.—It is antiseptic and astringent like other silver salts, with the asserted advantage of being non-irritant and more penetrating than silver nitrate. It is said to be useful in all cases where the non-caustic action of silver nitrate is indicated. Dosage.—It may be used in the anterior urethra in 0.25 to 1 per cent. solution; in the posterior urethra in from 1 to 4 per cent. solution; in ophthalmology in 5 per cent. solution. Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin. (Schering & Glatz, New York).

ARGONIN.

A soluble casein compound containing 4.28 per cent. of silver.

Actions and Uses.—Its action and uses are similar to those of silver nitrate, but it is claimed to have greater power of permeating living colloid membranes than other silver albumoses. It is applied as an injection in 0.1 to 0.2 per cent. solution; in ophthalmic practice a 10 to 20 per cent. solution in glycerin may be used. Dosage.—It is generally used in 0.5 per cent. solution, but even 20 per cent. solutions have been injected without producing irritant symptoms. Manufactured by Farbewerke vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

ARGYROL.

A compound of a derived proteid and silver oxide, containing from 20 to 25 per cent. of silver.

Actions and Uses.—Solutions of argyrol (20 to 50 per cent.) are said to be non-irritating to mucous membranes. Taken internally it is said to be non-toxic. It is claimed to be an antiseptic. It is recommended in urethritis and cystitis, in conjunctivitis and in affections of the nose, throat and ear. Dosage.—It is employed in from 10 to 25 per cent. and even stronger solutions. Manufactured by Barnes & Hille, Philadelphia.

ARISTOCHIN.

Aristochin.—$CO(C_{20}H_{23}N_2O_2)_2 = C_{41}H_{46}N_4O_5$, the neutral carbonic ester of quinine.

Actions and Uses.—The same as those of quinine, but, since it is only slowly acted on by acids, it is said not to produce disturbance of the stomach and to be notably free from tendency to production of cinchonism. Dosage.—The same as that of quinine, in powder, mixed with milk sugar, dry on the tongue or suspended in liquids. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York.

ARISTOL.

A name applied to Thymolis Iodidum U. S. P. Manufactured by Farbenfabrikin vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

ASPIRIN.

Aspirin $C_6H_4O(CH_3CO).COOH$, 1 : 2 = $C_9H_8O_4$, the acetyl derivative of salicylic acid.

Actions and Uses.—It acts like salicylic acid, over which it possesses the advantage of producing less of the undesired local and systemic side effects, on account of the slow liberation of the salicylic acid. It passes the stomach unchanged, the decomposition beginning in the intestine. Dosage.—0.3 to 1 Gm. (5 to 15 grains) in capsules or wafers, or dissolved in sweetened water or dry on the tongue, followed by a swallow of water. The powder should be dis-

pensed in waxed paper. Manufactured by Fabenfabriken. vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

BENZOSOL.

Benzosol, $C_6H_4(OCH_3)(C_6H_5COO)=C_{14}H_{12}O_3$, a cystalline compound of guaiacol in which the hydrogen of the hydroxyl is replaced by benzoyl.

Actions and Uses.—Benzosol is decomposed slowly in the intestinal tract into guaiacol and benzoic acid which exert their proper actions. The liberated constituents are absorbed and excreted in the urine. It is not irritating. Its uses are analogous to those of creosote and of benzoic acid. It is recommended in incipient pulmonary tuberculosis, as an intestinal antiseptic in fermentation, diarrhea, typhoid fever, diabetes mellitus and as a urinary disinfectant in cystitis, etc. Dosage.—0.2 to 0.6 Gm. (3 to 10 grains), in powder, capsule, pill, or suspended in liquids or as an emulsion. Manufactured by Farbwerke. vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

BETA-EUCAINE HYDROCHLORIDE.

Beta-eucaine hydrochloride, $C_5H_7N(CH_3)_3(C_6H_5COO).HCl$, the hydrochloride of 2.6.6-trimethyl-4-benzoyl-hydroxypiperidine. Actions and Uses.—Beta-eucaine hydrochloride is a local anesthetic like cocaine, but weaker and devoid of the stimulating properties of the latter. It does not dilate the pupil, nor does it contract the blood vessels as does cocaine. It has the advantage of stability even on prolonged boiling. It may be used in all cases in which cocaine is indicated as a local anesthetic, especially in ophthalmology. Dosage. It may be applied in a 2 to 3 per cent. solution to the eye, 5 to 10 per cent. for nose and throat, and 5 to 10 per cent. for ointment for hemorrhoids. Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering and Glatz, New York).

BETA-NAPHTHOL BENZOATE.

Beta-naphthol benzoate, $C_6H_5COO.C_{10}H_7=C_{17}H_{12}O_2$, the benzoic ester of B-naphthol.

Actions and Uses.—Beta-naphthol benzoate is split up into its constituents on reaching the intestinal tract and acts as an antiseptic. It is said to be diuretic. It is used internally as an intestinal antiseptic in diarrhea and typhoid fever. Externally it has been recommended as a parasiticide in the form of 3 to 10 per cent. ointment, and has been used in psoriasis, eczema, scabies, etc. Dosage.—0.2 to 0.5 Gm. (3 to 8 grains); maximum dose, single, 1 Gm. (15 grains), daily 4 Gm. (60 grains). Manufactured by Fabrik von Heyden, Radebeul near Dresden (Merck & Co., New York).

BETOL.

Betol, $C_6H_4.OH.COO(C_{10}H_7)=C_{17}H_{12}O_3$, the salicylic ester of B-naphthol.

Actions and Uses.—Betol is not affected in the stomach, but is split up in its original components when it reaches the intestinal tract by the pancreatic juice and intestinal secretions. It is believed to act as an intestinal antiseptic and, being excreted in the urine, to act in a similar way in the bladder. It has the anti-rheumatic properties of salicylic acid. It is recommended for intestinal fermentations, catarrh of the bladder, particularly in gonorrheal cystitis, for rheumatism, etc. Dosage.—0.3 to 0.5 Gm. (4 to 8 grains) in cachets, milk or emulsion. Manufactured by the Heyden Chemical Works, New York.

BISMAL.

Bismal, $4(C_{15}H_{12}O_{10}).3Bi(OH)_3=Bi_3C_{60}H_{57}O_{49}$, a compound of bismuth hydroxide and methylendigallic acid.

Actions and Uses.—Bismal is an astringent and is recommended for the

treatment of chronic diarrhea. Dosage.—0.12 to 0.3 Gm. (2 to 5 grains) in cachets or powder. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

BOROCHLORETONE.

A mixture of 1 part chloretone with 3 parts boric acid.

Actions and Uses.—Antiseptic and anesthetic, used externally as a surgical dressing powder. Prepared by Parke, Davis & Co., Detroit, Mich.

BROMETONE.

Brometone. 1,1,1-tribrom-2-methyl-propan-2-ol, $CBr_3C(OH)(CH_3).CH_3 = C_4H_7OBr_3$, produced by the reaction of acetone on bromoform.

Actions and Uses.—Brometone is claimed to have the sedative action of the bromides without the disadvantage of producing bromism. In doses of 0.3 Gm. (5 grains) four or five times a day, in adults, it is claimed to cause no unpleasant results and to produce no disturbance of the digestive organs, and to have no appreciable effect on the secretions. Its action is prompt and its effect is manifest for several hours. In doses exceeding 1.6 Gm. (25 grains) daily it may produce dizziness, vertigo, anorexia, and mental hebetude, all of which symptoms disappear on discontinuance of its use. Therapeutically it has been recommended in mild conditions of excitation and insomnia, in so-called narcotic abstinence, in hysteria and in nervous affections generally. It relieves some forms of cough and is said to produce amelioration in about 60 per cent. of cases of epilepsy. It has been used to relieve dizziness due to labyrinthine disturbance. Dosage.—The dose is 0.3 Gm. (5 grains), to be repeated two or three times during twenty-four hours. Manufactured by Parke, Davis & Co., Detroit, Mich.

(*To be continued.*)

SOMNOS.

The manufacturers of Somnos have been claiming that their preparation is a definite "chemical product formed by the synthesis of chlorenthanal with a polyatomic alcohol radical." Very few, if any, physicians who read this description realized that chlorethanal is another name for chloral and that a polyatomic alcohol radical, in this instance, meant glycerin. In *The Journal of the American Medical Association* for September 1, 1906, attention is called to the actual facts in regard to this preparation in a comment on the circular letter published by the H. K. Mulford Company. In the literature regarding the physiologic action of Somnos the H. K. Mulford Company claimed that it has no "depressive action on the heart or circulation and has no destructive influence on the red corpuscles of the blood, nor does it cause gastric disturbances by continued use." The literature also repeatedly said that it contained no chloral and that it was free from the bad effects of chloral.

The Council on Pharmacy and Chemistry, in *The Journal A. M. A.* for September 15, publishes a report of investigations that were made on mice, guinea-pigs and dogs for the purpose of proving or disproving the claims made for Somnos by its manufacturers. The result of the investigation showed that the physiologic action of Somnos is practically indistinguishable from that of a 5 per cent. solution of chloral hydrate.

According to the reports, Somnos is no less toxic than chloral hydrate, and the depressing effects on the temperature, respiration and circulation are the same in each instance. The Council suggests that physicians who are in

the habit of using Somnos should compare the results they obtain from it with a 5 per cent. elixir of hydrate of chloral. In this way they can verify for themselves whether or not the Council's conclusions are correct, that a 5 per cent. elixir of chloral glycerate (Somnos) has the same physiological and therapeutical action as a 5 per cent. elixir of chloral hydrate.

BOOK REVIEWS

Diseases of the Digestive System. Edited by Frank Billings, M. D. Professor of Medicine, University of Chicago. An authorized translation from "Die deutsche Klinik" under the general editorial supervision of J. L. Salinger, M. D. New York and London: D. Appleton & Co.

This volume includes articles from many of the most eminent of German clinicians, men such as Rosenheim, Riegel, Ewald, Boas, Oser and the like. It is a translation of the second part of "Die Deutsche Klinik," which, with Nothnagel's series, stands at the head of German clinical publications. The bulk of the volume is naturally devoted to diseases of the stomach and intestine, and most of the remainder to hepatic disorders. A chapter on "Symptomatology of Diseases of the Pancreas," by L. Oser, of Vienna, covers this subject adequately, and two chapters on perityphlitis, set forth the German views on this subject. The translation is well done, and the series can be unreservedly commended to our readers.

Essentials of Medical Electricity. By Edward Reginald Morton, M. D., Trinity University Toronto, etc., etc. With 11 plates and 70 illustrations. $1.50 net. London: Henry Kimpton. Chicago: W. T. Keener & Co. 1905.

The purpose of this little volume is to furnish to the student all the information necessary to enable him to approach the larger and more exhaustive works on medical electricity and electro-therapeutics. In a most concise and clear way the various forms of generators, batteries, rheostates, coils, etc., are described, while the remaining of the nine chapters are devoted to a consideration of the various types of electricity and currents and their different physiologic effect.

Syllabus of Lectures on Human Embryology: an introduction to the study of Obstetrics and Gynæcology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By Walter Porter Manton, M. D., Professor of Clinical Gynæcology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Third Edition. Revised and Enlarged. Illustrated with a colored frontispiece and numerous outline drawings. 12mo, 136 Pages; Bound in Extra Cloth. Price, $1.25, net. F. A. Davis Company. Philadelphia.

While this work is specially designed for, and will be found particularly useful to students in their first and second years at college and is likewise a desirable manual for review and reference for the general practitioner, it is not intended to take the place of the exhaustive text-books on Embryology, but is primarily for use in the class room supplementary to the lecture and for laboratory guidance.

Plaster of Paris and How to Use It, by Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Instructor in Surgery, N. Y. Post Graduate Medical School. 12mo; 72 Illustrations, about 100 pages. Surgery Pub. Co., 92 William St., N. Y. City, Cloth $1.00.

This is a most useful book not only on account of the general demand for information and instruction upon the subject but because this knowledge was not previously available except in part, by reference to many books on allied subjects. The whole subject, from the making of the bandage to its use as a support in every form of splint, corset or dressing, is described and illustrated. The use of plaster of Paris in Dental Surgery is also covered.

Conservative Gynecology and Electro-Therapeutics. By G. Betton Massey, M. D. Fifth Revised Edition. Illustrated with 12 Chromo-Lithographic Plates and 15 Half-Tones. F. A. Davis Co., Philadelphia. 1906.

A careful perusal of this volume must be recommended to every physician doing gynecologic work. It contains a large amount of valuable information. A non-operating gynecologist seems to be a better observer of details in the symptomatology which are of considerable importance from the point of view of diagnosis. The author's description of uterine discharges, his classification of salpingitis, his views on the correlation between the disorders of the nervous system and genital organs, and many other chapters in this volume, are exceedingly good.

An Introduction to Physiology. By William Townsend Porter, M. D. Associate Professor of Physiology In the Harvard Medical School. Philadelphia: J. B. Lippincott Co. 1906.

This volume is a collection of fundamental and accessory experiments in several fields in connection with the new teaching of physiology introduced by the author for the use of medical students in Harvard University. The new method is fundamentally different from the old one. It consists of experiments and observations made by the student himself. The didactic instruction follows the student's experiments and considers them in relation to the work of other observers.

STUDIES IN THE PSYCHOLOGY OF SEX—EROTIC SYMBOLISM, THE MECHANISM OF DETUMESCENCE, THE PSYCHIC STATE OF PREGNANCY. By Havenlock Ellis. Pages 285. Extra Cloth, $2.00, net. *Sold only by Subscription to Physicians, Lawyers, and Scientists.* F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This is the fifth volume of the interesting series entitled: Studies in the Psychology of Sex. It discusses Erotic Symbolism, the Mechanism of Detumescence and the Psychic State of Pregnancy. A sixth concluding volume will finally consider the bearings of the psychology of sex on that part of morals which may be called "Social Hygiene."

RECENT ADVANCES IN THE PHYSIOLOGY OF DIGESTION. By Ernest H. Starling, M. D., F.R. S. With twelve Illustrations. Chicago: W. T. Keener & Co., 1906. Price $2.00 net.

This little volume contains the ten lectures given by Starling in the physiological department of University College, London, on the recent advances made in the knowledge of the physiology of digestion. In a very lucid manner the results are given of extensive original investigations made in said laboratory on certain aspects of digestion.

NOTES.

W. B. Saunders Company, of Philadelphia and London, have just issued a revision of their handsome illustrated catalogue of medical, surgical, and scientific publications. This is a most elaborate and useful catalogue. The descriptions of the books are full, the specimen illustrations representative of the pictorial feature of the books from which they are taken, and the mechanical get-up entirely in keeping with the high order of the context. The authors listed are all men of recognized eminence in every branch and specialty of medical science. The catalogue is well worth having. A copy will be sent free upon request.

Timeliness of interest, aside from any other condition, lends especial importance to the announcement of the early publication of Foods and Their Adulterations, by Harvey W. Wiley, M. D., to be immediately followed by a companion volume, Beverages and Their Adulterations. Dr. Wiley is Chief Chemist to the United States Department of Agriculture, at Washington, and his wide researches in the interests of purity in food commodities give anything he might write on the subject an authoritativeness that is unquestioned. The books will be generously illustrated from original photographs and drawings.

County Societies in Affiliation with the State Medical Association

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Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico.
Barry	Wm. M. West	Monett	D. L. Mitchell	Cassville
Barton	G. D. Allee	Lamar	J. L. McComb	Lamar.
Bates	J. R. Coulson	Spruce	E. N. Chastain	Rich Hill.
Benton	G. S. Greeson	Lincoln	S. O. Davis	Warsaw.
Boone	I. E. Thornton	Columbia	W. A. Norris	Columbia.
Buchanan	O. G. Gleaves	St. Joseph	Chas. W. Fassett	St. Joseph.
Butler	C. F. Green	Poplar Bluff	J. W. Mott	Poplar Bluff.
Caldwell	R. K. Dodge	Polo	Tinsley Brown	Hamilton.
Callaway	J. F. Harrison	Fulton	Martin Yates	Fulton.
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Cape Girardeau	H. L. Cunningham	Cape Girardeau	I. D. Porterfield, Jr.	Cape Girardeau.
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton.
Carter-Shannon	F. Hyde	Eminence	W. F. Chaffin	Van Buren.
Cass	H. A. Brierly	Peculiar	J. A. Chilton	Raymore.
Cedar	Kimball Hill	El Dorado Springs	J. W. Dawson	El Dorado Springs.
Chariton	Oliver McEwen	Shannondale	R. G. Epperly	Salisbury.
Christian	J. C. Young	Ozark	J. A. Roberson	Ozark.
Clark	H. W. Harris	Winchester	A. H. Teel	Kahoka
Clay	L. J. Jones	Linden	F. H. Matthews	Liberty.
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg.
Cole	G. Ettmueller	Jefferson City	A. W. McAlester	Jefferson City.
Cooper	F. R. Smiley	Boonville	J. R. Lionberger	Boonville.
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville.
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin.
DeKalb	H. P. Yeater	Maysville	R. A. Evans	Amity.
Dent	A. F. McMurtrey	Salem	J. C. Welch	Salem.
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett.
Franklin	H. A. Booth	Pacific	A. C. Brown	Moselle.
Gasconade-Marie Osage	J. J. Ferrell	Owensville	J. W. Nieweg	Lois.
Gentry	G. W. Whiteley	Albany	J. N. Conrad	Albany.
Greene	J. R. Boyd	Springfield	J. L. Ormsbee	Springfield.
Grundy	N. E. Sutton	Trenton	D. W. Coon	Trenton.
Harrison	A. H. Vandivert	Bethany	W. H. Wiley	Ridgeway.
Henry	W. H. Benway	Deepwater	F. M. Douglass	Clinton.
Holt	C. L. Evans	Oregon	J. F. Chandler	Forest City.
Howard	N. E. Smith	Fayette	C. W. Watts	Fayette.
Howell	A. H. Thompson	Lanton	A. H. Thornburgh	West Plains.
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton.
Jackson	O. H. Dove	Kansas City	E. L. Stewart	Kansas City.
Jasper	M. C. Shelton	Joplin	R. M. James	Joplin.
Jefferson	J. W. Pickel	Crystal City	C. G. Harris	Festus.
Johnson	L. J. Schofield	Warrensburg	E. H. Gilbert	Warrensburg.
Knox	L. S. Brown	Edina	Henry J. Jurgen	Edina.
Laclede	J. A. McComb	Lebanon	J. A. Pinckard	Lebanon.
Lafayette	P. S. Fulkerson	Lexington	C. T. Ryland	Lexington.
Lawrence-Stone	F. S. Stevenson	Aurora	C. A. Moore	Aurora
Lewis	J. C. Brown	Lewistown	Paul F. Cole	Steffenville.
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy.
Linn	J. W. Mason	Brookfield	Foster Burke	Laclede.
Livingston	L. E. Tracy	Chillicothe	W. M. Girdner	Chillicothe.
McDonald	E. F. Doty	Anderson	M. L. Sellers	Anderson.
Macon	W. H. Miller	Macon	C. W. Reagan	Macon.
Madison	C. A. Anthony	Fredericktown	S. C. Slaughter	Fredericktown.
Marion	Richard Schmidt	Hannibal	H. L. Banks	Hannibal.
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton.
Miller	W. A. Von Gremp	Iberia	W. L. Allee	Eldon.
Mississippi	G. R. Wallace	Bertrand	R. K. Ogilvie	Charleston.
Moniteau	J. M. Robertson	Latham	W. R. Patterson	Tipton.
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris.
Morgan	W. L. Hatler	Barnett	J. T. Beale	Versailles.
New Madrid	Welton O'Bannon	New Madrid	C. W. Watson	New Madrid.
Newton	R. L. Wills	Neosho	Horace Bowers	Neosho.
Nodaway	F. R. Anthony	Maryville	H. L. Sayler	Elmo.
Pemiscot	J. G. Luten	Caruthersville	John Johnson	Hayti.
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville.
Pettis	S. G. Kelly	Sedalia	Guy Titsworth	Sedalia.
Phelps	W. H. Bruer	St. James	S. L. Baysinger	Rolla
Pike	J. W. Dreyfus	Louisiana	R. G. Hereford	Louisiana.
Platte	Spence Redman	Platte City	G. C. Coffey	Platte City.
Pulaski	W. L. Ragan	Richland	G. W. Orrick	Crocker.
Putnam	C. H. Carryer	Hartford	T. A. Townsend	Unionville.
Ralls	W. S. Harwood	Rensselaer	T. J. Downing	New London.
Randolph	G. O. Cuppaidge	Moberly	W. M. Dickerson	Renick.
Ray	L. D. Greene	Richmond	E. F. Higdon	Richmond.
Reynolds	J. M. Lowrey	Centerville	T. W. Chilton	Corridon.
Ripley	S. A. Proctor	Doniphan	J. F. Redwine	Doniphan.
Saline	D. C. Gore	Marshall	D. F. Bell	Marshall.
St. Charles	J. R. Mudd	St. Charles	B. K. Stumberg	St. Charles.
St. Clair	W. Cline	Appleton City	D. B. Williams	Osceola.
St. Francois	J. L. Haw	Farmington	A. L. Evans	Bonne Terre.
Ste. Genevieve	C. Moore	St. Marys	R. W. Lanning	St. Genevieve
St. Louis	J. C. Morfit	Humboldt Bldg	Davis Forster	5249 Raymond.
St. Louis Co.	R. E. Guibor	Maplewood	R. D. Moore	Central.
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing.
Scotland	W. E. H. Bondurant	Memphis	A. E. Platter	Memphis.
Scott	T. F. Frazier	Commerce	C. P. Haw	Benton.
Shelby	L. W. Dallis	Hunnewell	A. M. Wood	Lentner.
Stoddard	T. B. Wingo	Dexter	Ed. Moore	Bloomfield.
Sullivan	J. C. Kessinger	Milan	J. S. Montgomery	Milan.
Vernon	W. T. Bohannan	Nevada	T. McLemore	Nevada.
Warren	W. J. Alexander	Marthasville	E. A. Fluesmeier	Wright City.
Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade.
Wayne	J. P. Sebastain	Patterson	R. J. Owens	Mill Spring.
Worth	Arch Long	Denver	J. K. Phipps	Grant City.

County.	Date of Meeting.
Adair	Monthly. First Thursday.
Andrew	Monthly. First Wednesday.
Atchison	Quarterly. January, April, July, October.
Audrain	Monthly. First Monday.
Barton	Quarterly. First Thursday, May, Aug., Nov., Feb.
Bates	Quarterly. Last Thursday in Feb., May, Aug. and Nov.
Barry	
Benton	Quarterly. First Tuesday, January, April, July, October.
Boone	Monthly. First Monday.
Buchanan	Semi-Monthly. Second and Fourth Wednesday.
Butler	Monthly. Last Friday
Caldwell	Quarterly. July, October, January, April.
Callaway	Monthly. Second Thursday.
Camden	Quarterly. Second Monday. April, July, Oct., and Jan.
Cape Girardeau	Monthly. Second Wednesday.
Carroll	Monthly. Second Tuesday.
Carter-Shannon	Quarterly. February, May, August and November.
Cass	Quarterly. First Thursday, March, June, Sept., Dec.
Cedar	Monthly.
Charlton	Monthly. Last Thursday.
Christian	
Clark	Bi-Monthly. First Mondays, Feb., April, June, Aug., Oct., Dec.
Clay	Monthly. Last Monday.
Clinton	Monthly. First Tuesday.
Cole	Quarterly. Second Thursday of Jan., April, July, Oct.
Cooper	Monthly. First Tuesday.
Crawford	Quarterly. First Tuesday, April, July, October, January.
Daviess	Quarterly. January, April, July, October.
DeKalb	
Dent	
Dunklin	Monthly. Second Tuesday.
Franklin	Monthly. First Tuesday.
Gasconade-Maries-Osage	Semi-Annual. Fourth Thursday, April and October.
Gentry	Monthly.
Greene	Semi-Monthly. Second and Fourth Friday.
Grundy	Quarterly. July, October, January, April.
Harrison	Quarterly. Third Tuesday, January, April, July, October.
Henry	Quarterly.—Second Wednesday, Dec., March, June, Sept.
Holt	Quarterly.—First Thursday, January, April, July, October.
Howard	Monthly. First Friday.
Howell	Bi-Monthly. First Thursday of Dec., Feb., April, June, Aug., Oct.
Iron	Monthly. First Saturday.
Jackson	Semi-Monthly. Second and Fourth Thursdays.
Jasper	Semi-Monthly. First and Third Mondays.
Jefferson	Quarterly. Fourth Tuesday, Jan., Apr., July, Oct.
Johnson	Quarterly. June, September, December, March.
Knox	Monthly. First Monday.
Laclede	Quarterly. Second Monday, Jan., April, July, Oct.
Lafayette	Monthly. Second Tuesday, Jan., Mch., May, July, Sept., Nov.
Lawrence	Monthly.
Lawrence-Stone	
Lincoln	Quarterly. May, August, November, February.
Linn	Bi-Monthly. Jan., March, May, July, Sept., Nov.
Livingston	Monthly. Third Wednesday.
McDonald	Quarterly. Second Wednesday, Jan., April, July, Oct.
Macon	Monthly. Second Tuesday. 10 a. m.
Madison	Semi-Monthly. First and Third Tuesday.
Marion	Monthly. First Friday.
Mercer	Monthly. Second Thursday.
Miller	Quarterly. First Thursday of March, June, Sept. and Dec.
Mississippi	Monthly. First Monday.
Moniteau	Quarterly. March, June, September, December.
Monroe	Quarterly. First Tuesday of April, July, October, January.
Morgan	Quarterly. First Wednesday of March, June, Sept., Dec.
New Madrid	
Newton	Monthly. Second Tuesday.
Nodaway	Monthly. Second Tuesday.
Pemiscot	Quarterly. First Tuesday, January, April, July, November.
Perry	Monthly. First Wednesday.
Pettis	Semi-Monthly. First and Third Monday.
Phelps	Quarterly. March, June, September, December.
Pike	Monthly.
Platte	Monthly. First Wednesday.
Pulaski	Quarterly. November, February, May, August.
Putnam	Monthly. First Wednesday.
Ralls	Quarterly. January, April, July and October.
Randolph	Monthly. Second Tuesday.
Ray	Monthly. Third Wednesday.
Reynolds	Quarterly. January, March, June, October.
Ripley	
Saline	Monthly. Second Tuesday.
St. Charles	Monthly.
St. Clair	Quarterly. Second Tuesday, March, June, Sept., Dec.
St. Francois	
Ste. Genevieve	Monthly. Second Wednesday.
St. Louis	Weekly. Saturdays.
St. Louis County	Monthly. Second Wednesday.
Schuyler	Semi-Annually. July and December.
Scotland	Monthly. Second Tuesday.
Scott	Monthly.
Shelby	Quarterly. June, September, December, March.
Stoddard	Bi-Monthly. First Wednesday, Jan., Mch., July, Sept., Nov.
Sullivan	Monthly.
Vernon	Quarterly. First Tuesday, March, June, Sept. and Dec.
Warren	Monthly.
Washington	Monthly. First Saturday.
Wayne	Monthly.
Worth	Monthly. Second Wednesday.

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Atlantic City, 1907.

President: WM. J. MAYO, Rochester, Minn.
President Elect: JOSEPH D. BRYANT, New York City.
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearborn Ave., Chicago.

MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May, 1907.

President: C. H. WALLACE, St. Joseph.
Vice-Presidents:
F. W. ALLEN, Callao; W. G. COWAN, Sedalia; C. J. ORR, St. Louis; E. H. THRAILKILL, Kansas City; H. L. RIED, Charleston
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Assistant Secretary: GAIL ALLEE, Lamar.
Assistant Secretary: H. A. McDONALD, Pisgah.
Treasurer: J. FRANKLIN WELCH, Salisbury.

Medical Section.

Chairman: J. H. P. BAKER, Salisbury.
Secretary; GAIL ALLEE, Lamar.

Surgical Section.

Chairman: WARREN B. OUTTEN, St. Louis.
Secretary: H. A. McDONALD, Pisgah.

ORATORS.

Oration in Medicine:

WM. F. KUHN, Farmington.

Oration in Surgery:

PAUL Y. TUPPER, St Louis.

COMMITTEES:

Committee on Scientific Work.

C. M. Nicholson, Chairman; J. C. Morfit, F. E. Murphy.

Publication Committee.

C. M. Nicholson, Chairman; W. B. Dorsett; B. M. Hypes; W. G. Moore.

Committee on Public Health and Legislation.

F. J. Lutz, Chairman; Geo. Homan, H. E. Pearse.

Committee on Medical Education.

Woodson Moss, Chairman; W. B. Dorsett, Robt. T. Sloan.

Committee on Tuberculosis.

Wm. Porter, Chairman; J. M. Allen; W. S. Allee; B. H. Zwart.

COUNCILLOR DISTRICTS AND COUNTIES IN EACH DISTRICT.*

First District.—Councillor, E. E. Parrish, Memphis. Counties: Clark, Scotland, Schuyler.

Second District.—Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.

Third District.—Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.

Fourth District.—Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.

Fifth District.—Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.

Sixth District.—Councillor, W. E. McKinley, Denver. Counties: Harrison, Worth, Gentry, DeKalb.

Seventh District.—Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

Eighth District.—Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.

Ninth District.—Councillor, C. W. Reagan, Macon. Counties: Macon, Randolph, Monroe.

Tenth District.—Councillor, Woodson Moss, Columbia. Counties: Audrain, Boone, Howard, Callaway, Warren, *Montgomery.*

Eleventh District.—Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.

Twelfth District.—Councillor, F. J. Lutz, St. Louis. Counties: Franklin.

Thirteenth District.—Councillor, B. M. Hypes, St. Louis. Counties: Jefferson, St. Genevieve, Perry.

Fourteenth District.—Councillor, Wm. F. Kuhn, Farmington. Counties: Washington, Reynolds, Iron, St. Francis.

Fifteenth District.—Councillor, J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrd, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemiscot.

Sixteenth District.—Councillor, J. D. Porterfield, Jr., Cape Girardeau. Counties: Scott, Madison, Cape Girardeau, *Bollinger.*

Seventeenth District.—Councillor, W. S. Allee, Olean. Counties: Miller, Moniteau, Morgan, Camden.

Eighteenth District.—Councillor, G. Ettmueller, Jefferson City. Counties: Cole, Osage, Maries, Gasconade.

Nineteenth District.—Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, *Hickory.*

Twentieth District.—Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.

Twenty-first District.—Councillor, M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Johnson.

Twenty-second District.—Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.

Twenty-third District.—Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, *Dade.*

Twenty-fourth District.—Councillor, R. L. Johnson, Rolla, Counties: Crawford, Phelps, Pulaski, Laclede, Dent, *Dallas.*

Twenty-fifth District.—Councillor, T. A. Coffelt, Springfield. Counties: Greene, Lawrence, Barry, Stone, Christian, *Webster, Polk, Taney.*

Twenty-sixth District.—Councillor, H. C. Shuttee, West Plains. Counties: Howell, Shannon, *Ozark, Oregon, Texas, Wright, Douglass.*

Counties in italic are unorganized.